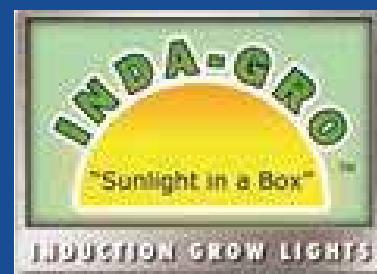


ASHS Annual Conference

July 22 – 25, 2013

**JW Marriott Desert Springs Resort
Palm Desert, California**

**American Society for Horticultural Science
1018 Duke Street, Alexandria, VA 22314**



American Society for Horticultural Science

1018 Duke Street, Alexandria, Virginia 22314, USA
Phone 703.836.4606 Fax 703.836.2024

July 2013

On behalf of the ASHS Board of Directors, the Technical Program committee, the great staff at ASHS Headquarters, and all the volunteers who have worked hard to make this conference outstanding, I want to welcome you to the 110th Annual Conference of the American Society for Horticultural Science (ASHS) being held at the JW Marriott Desert Springs Resort & Spa! A very special welcome to our International members, who have traveled far to be with us. In addition, a warm welcome and a big thank you to our friends and colleagues in the corporate world who have chosen our Conference to attend. Thank you and welcome to all the folks that brought an exhibition booth. It takes a lot of effort to bring all the display materials, and we do appreciate their hard work. Please take a moment and visit the booths, and thank them for sharing their business with us.

We have a great Conference planned for you. You can expect sizzling hot speakers, interesting colloquia, educational workshops, excellent symposia, fun tours, and other fiery activities. This year all of our ASHS awards will be presented to outstanding and deserving individuals who have gone above and beyond for horticulture. When you see the award winners, give them a hearty and warm congratulations, or better yet, attend the Awards Ceremony, and watch them be honored.

This year's Conference is held in the heart of the Coachella Valley. The Coachella Valley is among the largest crop-growing regions in California. More than two-thirds of local farmland is irrigated in part with Colorado River water delivered via the All-American Canal. More than 60% of area farms use drip or other microirrigation techniques. The horticulture industry in 2011 was valued at \$535 million, more than a dozen different kinds of fruit are grown valued at \$225 million, and at least two dozen types of vegetables are grown worth \$215 million. The nursery industry is valued at \$30 million, and the turf and golf courses add another \$65 million.

This is the primary date-growing region in the United States, responsible for nearly 95% of the nation's crop, and celebrated each year with a National Date Festival. USDA horticulturist Bernard Johnson planted a number of date palm shoots that he brought back from Algeria in September 1903. The area's entire date industry can be traced back to this original USDA horticulturist's work. Horticulture is the life blood of this impressive valley.

Lastly, I express gratitude to you for attending the Conference. Without you and your continued support of ASHS, we would not be the best horticulture society in the world.

Sincerely,
Paul W. Bosland
ASHS President

ASHS Annual Conference

July 22–25, 2013 • Palm Desert, California

Contents

Welcome letter from ASHS President Paul Bosland	inside front cover
General Information, Contents.....	1
Hotel Map/Floor Plan	2
Conference At-A-Glance	4
Meetings and Activities of ASHS Committees, Working Groups, and Other Official Bodies	
ASHS Advisory Council/Board/ Committee Meetings	9
ASHS Working Group Business Meetings	10
Special Events.....	12
Breakfasts, Luncheons, Breaks, Dinners, Receptions	12
Exhibits, Posters, Registration	13
Tours	13
Student Events	14
Meetings of Affiliated Organizations.....	15
Graduate Student Poster Competition Session Schedule.....	16
Guide to Exhibitors	19
ASHS Award Ceremony	22
Hall of Fame	23
Fellows.....	25
Career Award Recipients	33
Publication Awards	39
ASHS Scholars	40
Outstanding Undergraduate Student Award Winners	42
Acknowledgements.....	44
Day-by-Day Program Schedule	47
Sunday/Monday.....	47
Tuesday.....	64
Wednesday.....	85
Thursday.....	103
Friday/Saturday	114
Index of Authors, Coordinators, Presenters, and Moderators listed in the Day-by-Day Schedule.....	115

General Information

Conference Facilities: All conference activities will take place at the JW Marriott Desert Springs, Palm Desert, CA, unless otherwise stated. Please check the detailed program and schedule for exact room locations.

Registration: The conference registration desk will be located at the Center and North Counter.

Operation hours are:

Sunday, July 21	1:00–5:00 PM
Monday, July 22	7:30 AM–6:00 PM
Tuesday, July 23	7:30 AM–5:00 PM
Wednesday, July 24	7:30 AM–5:00 PM
Thursday, July 25	7:30 AM–3:00 PM

Posters: Posters are located in the Desert Ballroom 7–8.

Set-up:

Sunday, July 21	2:00–5:00 PM
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Viewing hours:

Monday, July 22	8:30 AM–5:00 PM
Tuesday, July 23	8:30 AM–5:00 PM
Wednesday, July 24	8:30 AM–1:45 PM

Note: All posters must be removed between 1:45 PM and 3:30 PM on Wednesday, July 24.

Exhibits: Exhibitors are located in the Desert Ballroom 7–8.

Exhibitor move-in:

Sunday, July 21	2:00–5:00 PM
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Exhibitor move-out:

Wednesday, July 24	2:30–5:00 PM
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Open to attendees:

Monday, July 22	8:30 AM–2:30 PM
Tuesday, July 23	8:30 AM–2:30 PM
Wednesday, July 24	8:30 AM–2:30 PM

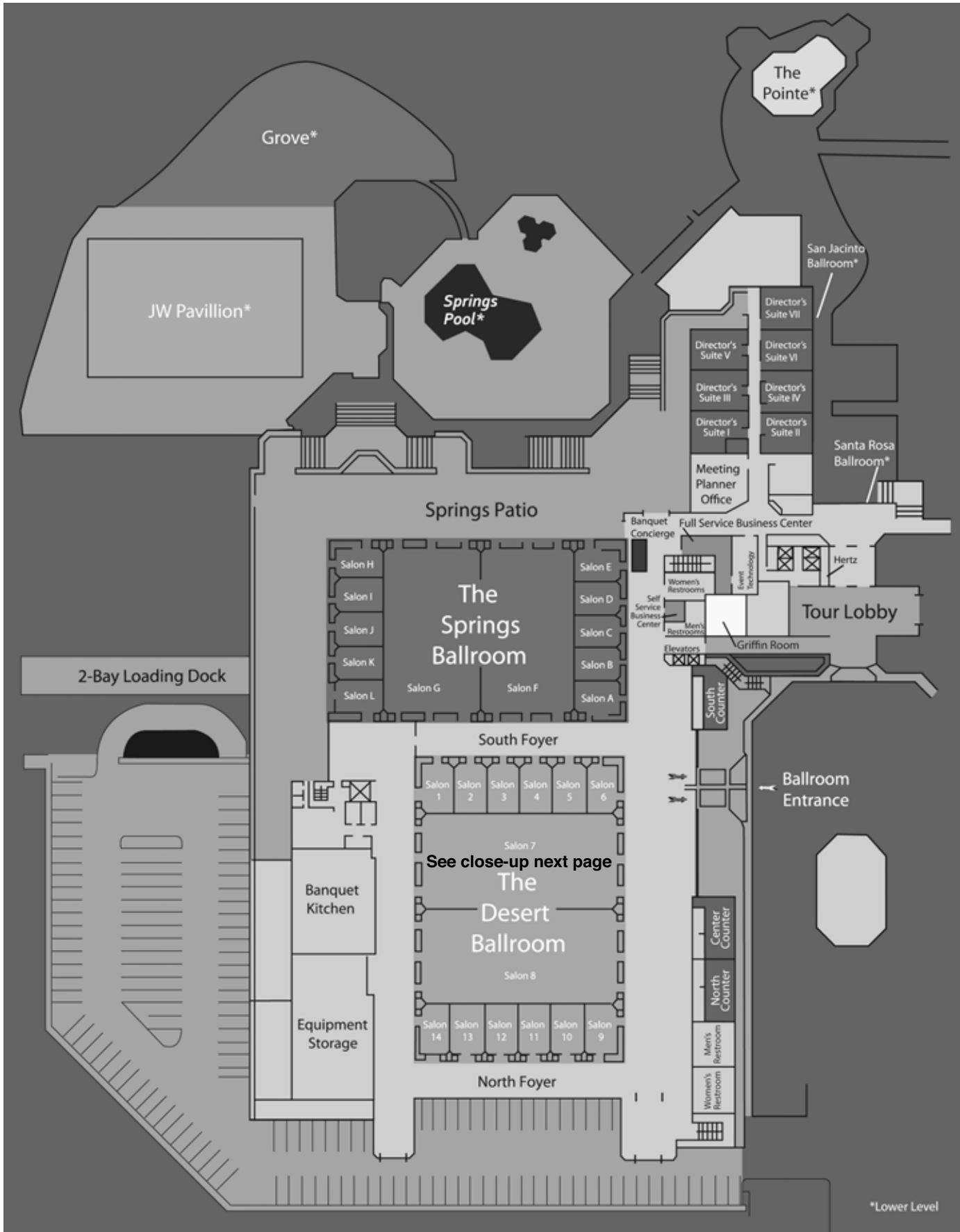
Please Note:

All information in regard to scheduling for the ASHS–2013 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.

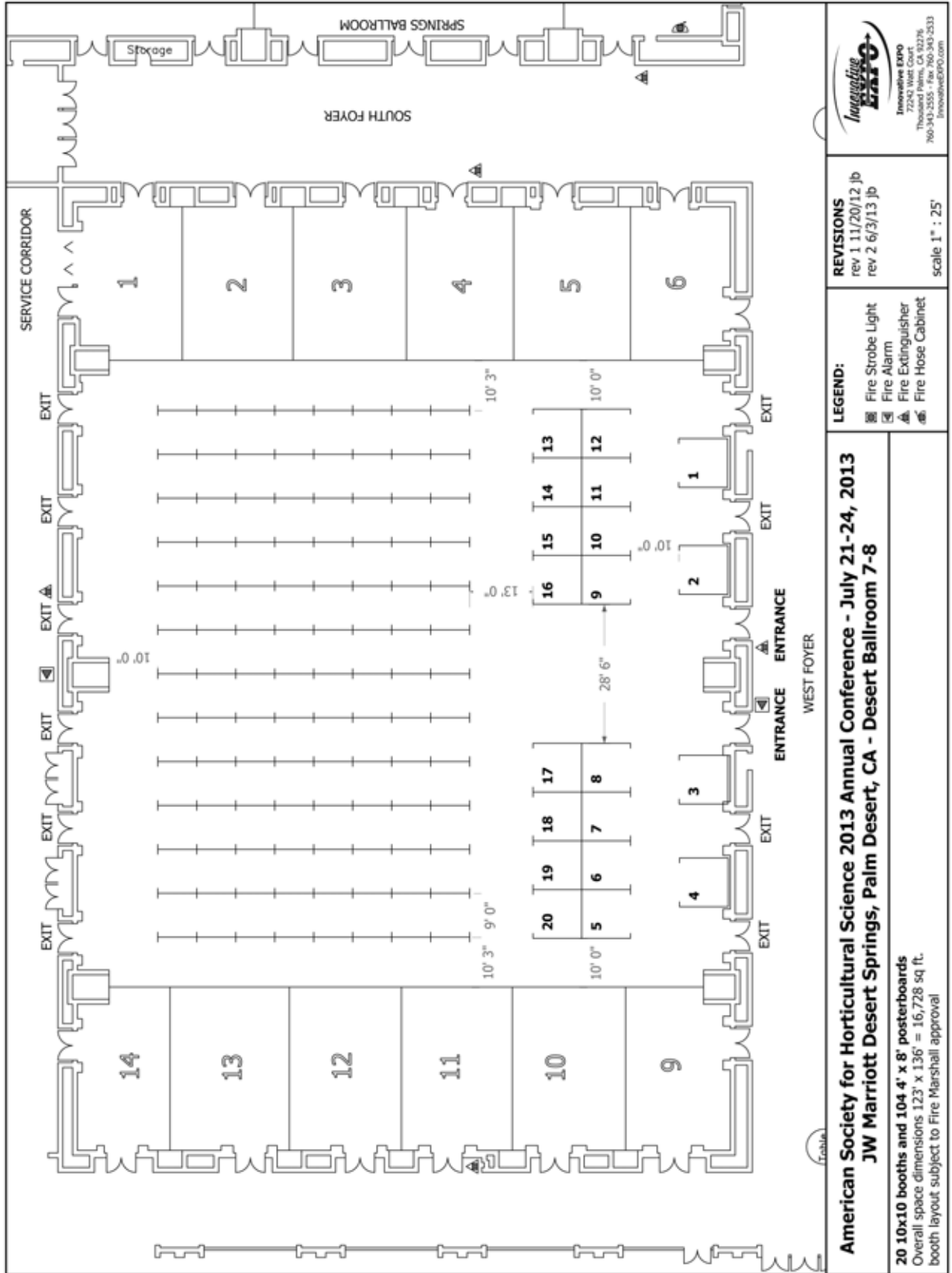
About Palm Desert:

Palm Desert is the geographic center of the Coachella Valley, a fast-growing region of southern California that comprises nine cities. Palm Desert has evolved into a vibrant small city that today is the educational, retail, and cultural hub of the Valley. Source: www.palm-desert.org/about-palm-desert

Hotel Map/Floor Plan



Close-Up of Desert Ballroom Salon 7 and 8



Innovative EXPO
 Innovative EXPO
 72243 Watt Court
 Thousand Oaks, CA 91320
 760-343-2555 - Fax: 760-343-2533
 InnovativeEXPO.com

REVISIONS
 rev 1 11/20/12 jlb
 rev 2 6/3/13 jlb

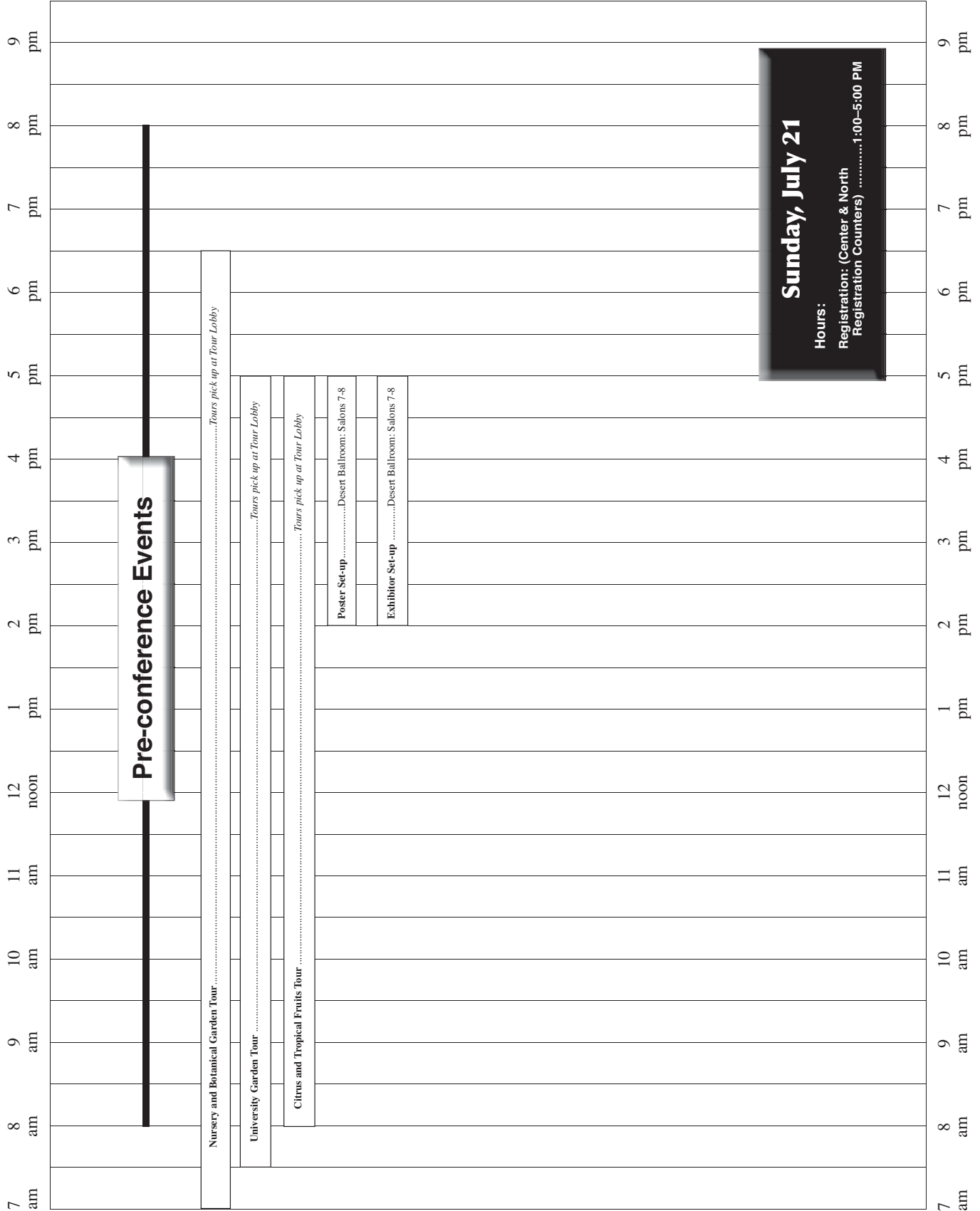
LEGEND:
 Fire Strobe Light
 Fire Alarm
 Fire Extinguisher
 Fire Hose Cabinet

scale 1" : 25'

American Society for Horticultural Science 2013 Annual Conference - July 21-24, 2013
JW Marriott Desert Springs, Palm Desert, CA - Desert Ballroom 7-8

20 10x10 booths and 104 4' x 8' posterboards
 Overall space dimensions 123' x 136' = 16,728 sq. ft.
 booth layout subject to Fire Marshall approval

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
Huntington Gardens Tour															
Grad Student WG Gathering Starbucks at JW Marriott															
Break Desert Ballroom Salons 7-8															
Listening Session with NIFA Director Sonny Ramaswamy Springs Salon F															
Undergraduate Student (UG) WG Training Session Springs Salon A/B															
Working Group Chairs & Production (PGR) WG Bus. Mtg. Springs Salon C															
Marketing & Economics (MREC) WG Bus. Mtg. Desert Salon 3															
Human Issues in Horticulture (HH) WG Bus. Mtg. Desert Salon 11															
Leady Vegetable Crop Germplasm Committee Mtg. Directors Suite VI															
NCH186: Water Management & Quality for Ornamental Crop Production and Health															
NCH186: Water Management & Quality for Ornamental Crop Production and Health															
Grad Student Poster Competition: 1															
Grad Student Poster Competition: 2															
Computer Applications in Horticulture															
Genetics & Germplasm															
Human Issues in Horticulture															
Plant Biotechnology															
Postharvest															
Vegetable Crops Mtg.															
Viticulture & Small Fruits															
Waste Utilization in Horticulture															
Posters located in the Desert Ballroom: Salons 7-8															
Award Recipient Reception (by invitation) Directors Suite V															
Emeriti (EMER) WG Bus. Mtg. Desert Salon 3															
Organic Horticulture (ORGH) WG Bus. Mtg. Desert Salon 11															
eXtension (EEXT) WG Bus. Mtg. Desert Salon 11															
Propagation (PROP) WG Bus. Mtg. Springs Salon C															
Floriculture (FLOR) WG Bus. Mtg. Springs Salon C															
Public Horticulture (PUBHORT) WG Bus. Mtg. Desert Salon 11															
Oral Session: Viticulture & Small Fruits Desert Salon 13-14															
Oral Session: Genetics & Germplasm Desert Salon 4-6															
Journal of the ASHS Editorial Board Mtg. Desert Salon 3															
Workshop: SCRI Project Directors Desert Salon 9-10															
Fellows Screening Committee Mtg. Desert Salon 3															
Education Div. Advisory Council Mtg. Desert Salon 3															
Scholarship Awards Committee Mtg. Desert Salon 12															
Res. Div. Advisory Council Mtg. Desert Salon 3															
Oral Session: Organic Horticulture Desert Salon 9-10															
Oral Session: Vegetable Breeding WG Bus. Mtg. Desert Salon 4-6															
Plant Biotechnology (BTCH) WG Bus. Mtg. Desert Salon 11															
Fruit Breeding (FRBR) WG Bus. Mtg. Springs Salon C															
History of Horticultural Science (HIST) WG Bus. Mtg. Desert Salon 12															
Viticulture & Small Fruits (NSF) WG Bus. Mtg. Springs Salon C															
Undergraduate Student Poster Competition Desert Ballroom: Salons 7-8															
SRASHS Executive Committee Meeting Directors Suite VI															
Workshop: How Public Policy Engagement Helps Horticultural Scientists Desert Salon 1-2															
Workshop: Sustainable Production of Essential Oils Desert Salon 13-14															
Workshop: eXtension/Ecampus/On Campus: Synergies in Curriculum Development Springs Salon A/B															
Workshop: What Happens When Your Growth Chamber, Lighting or Controls Become Obsolete? Reimaging Growth Chambers to Improve Performance Springs Salon D/E															
Workshop: Contributions of Luther Burbank: Plant Breeding Artist & Legend Springs Salon D/E															
Workshop: How to Get in (and Succeed in) Graduate School Springs Salon A/B															
Workshop: Ten Great Ideas for Your Master Gardener/Consumer Horticulture Program Desert Salon 1-2															
Workshop: What Happens When Your Growth Chamber, Lighting or Controls Become Obsolete? Reimaging Growth Chambers to Improve Performance Springs Salon D/E															
Welcome Reception Springs Patio															

Monday, July 22

Registration: (Center & North Registration Counters) 7:30 AM–5:00 PM
Exhibits Open: (Desert Ballroom: Salons 7-8) 8:30 AM–2:30 PM
Poster Hall Open (Desert Ballroom: Salons 7-8) 8:30 AM–5:00 PM

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
	Golf Course and Irrigation Tour Tours depart from Tour Lobby														
	Whitewater Preserve & Wind Farms Tour ... Tours depart from Tour Lobby														
	Colloquium: Integrated Pest Management for Vegetable Crops in the Tropics Desert Salon 4-6														
	Horticultural Commodity Judging Contest & Plant Identification Contest Springs Salon F														
	The Horticultural Commodity Judging Plant Identification Written ExaminationDirectors Suite VI														
	Extension & Industry Division BreakfastSprings Ballroom Salons J-L														
	International Division Advisory Council Mtg.Desert Salon 3														
	Root Growth and Rhizosphere Dynamics (RHZ) WG Bus. Mtg. Desert Salon 11														
	Seed & Stand Establishment (SSEST) WG WG Bus. Mtg. Springs Salon C														
	Vegetable Breeding (VGBR) WG Bus. Mtg. Springs Salon C														
	Nursery Crops (NUR) WG WG Bus. Mtg. Desert Salon 11														
	Other Fruit & Nut Crops Desert Salon 1-2														
	Oral Session: Ornamental Plant Breeding Springs Salon D/E														
	Oral Session: Postharvest Desert Salon 9-10														
	Oral Session: SCRI-MINDS Water Utilization & Management Desert Salon 1-3-14														
	Break Desert Ballroom Salons 7-8														
	Grad Student WG Gathering Starbucks at JW Marriott														
	Genetics and Gemplasm (GG) WG Bus. Mtg. Desert Salon 11														
	Oral Session: Floriculture Springs Salon A/B														
	Oral Session: Citrus and Other Fruit & Nut Crops Desert Salon 1-2														
	Planticulture (PLAST) WG Bus. Mtg. Desert Salon 11														
	HorScience Editorial Board Desert Salon 3														
	Consulting Editors Springs Salon C														
	Vegetable Breeding (VGBR) WG Bus. Mtg. Springs Salon C														
	Bioregry (BioE) WG Bus. Mtg. Desert Salon 12														
	Workshop: Consumer Research on SustainabilityDesert Salon 13-14														
	Workshop: Perspectives on Building Strong University-Industry Research RelationshipsDesert Salon 9-10														
	Oral Session: Fruit Breeding Springs Salon D/E														
	Horticultural Landmark Selection Committee Mtg. Desert Salon 12														
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	Oral Session: Fruit Breeding Springs Salon D/E														
	Workshop: Consumer Research on SustainabilityDesert Salon 13-14														
	Workshop: Perspectives on Building Strong University-Industry Research RelationshipsDesert Salon 9-10														

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

Includes Tours and Special Events (subject to change)

ASHS ADVISORY COUNCIL/BOARD/COMMITTEE MEETINGS

Advisory Council Meetings

Education Division Advisory Council	Monday, July 22	5:00–6:00 PM	Desert Salon 3
Extension Division Advisory Council	Wednesday, July 24	9:00–11:00 AM	Desert Salon 3
Industry Division Advisory Council	Wednesday, July 24	11:00 AM–12:00 PM	Desert Salon 3
International Division Advisory Council	Tuesday, July 23	8:00–10:00 AM	Desert Salon 3
Research Division Advisory Council	Monday, July 22	6:00–6:30 PM	Desert Salon 3

Board Meetings:

ASHS Board of Directors	Thursday, July 25	10:00 AM–4:00 PM	Directors Suite VI
Certified Horticulturist (CH) Board	Thursday, July 25	10:00 AM–12:00 PM	Desert Salon 12
Certified Professional Horticulturist (CPH) Board	Wednesday, July 24	10:00 AM–12:00 PM	Desert Salon 12
<i>HortScience</i> Editorial Board	Tuesday, July 23	11:00 AM–12:00 PM	Desert Salon 3
<i>HortTechnology</i> Editorial Board	Monday, July 22	3:00–4:00 PM	Desert Salon 3
<i>Journal of the ASHS</i> Editorial Board	Monday, July 22	2:00–3:00 PM	Desert Salon 3

Committee Meetings:

Annual Conference Technical Program Committee	Tuesday, July 23	4:00–5:30 PM	Desert Salon 12
Awards Committee	Tuesday, July 23	2:00–3:00 PM	Desert Salon 12
Collegiate Activities Committee (CAC)	Tuesday, July 23	5:00–6:00 PM	Desert Salon 3
Consulting Editors	Tuesday, July 23	10:00–11:00 AM	Springs Salon C
Endowment Fund Committee	Tuesday, July 23	1:00–3:00 PM	Desert Salon 3
Fellows Screening Committee	Monday, July 22	4:00–5:00 PM	Desert Salon 3
Finance Committee	Wednesday, July 24	8:00–9:00 AM	Desert Salon 12
Graduate Activities Committee	Tuesday, July 23	3:00–4:00 PM	Desert Salon 12
Horticulture Hall of Fame Selection	Wednesday, July 24	1:30–2:00 PM	Desert Salon 3
Horticultural Landmark Selection Committee	Tuesday, July 23	12:00–1:00 PM	Desert Salon 12
Membership Committee	Wednesday, July 24	2:00–3:00 PM	Desert Salon 12
Nominations and Elections Committee	Wednesday, July 24	9:00–10:00 AM	Desert Salon 12
Scholarship Awards Committee Meeting	Monday, July 22	5:00–6:00 PM	Desert Salon 12
SRASHS Executive Committee Meeting	Monday, July 22	4:00–6:00 PM	Directors Suite VI
William A. (“Tex”) Frazier Lecture Selection Committee	Tuesday, July 23	12:00–1:00 PM	Desert Salon 3

ASHS Working Group Business Meetings

All Working Group Chairs & Chairs-elect	Monday, July 22	8:00–9:00 AM	Desert Salon 9-10
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EDUCATION DIVISION

Education Division Advisory Council Meeting	Monday, July 22	5:00–6:00 PM	Desert Salon 3
Administrators Working Group Breakfast	Wednesday, July 24	8:30–10:00 AM	Director Suite III
Computer Applications in Horticulture (COMP) Working Group	Thursday, July 25	1:00–2:00 PM	Desert Salon 3
Emeriti (EMER) Working Group	Monday, July 22	12:00–1:00 PM	Desert Salon 3
Graduate Student (GRAD) Working Group	Thursday, July 25	8:00–9:00 AM	Springs Salon C
History of Horticultural Science (HIST) Working Group	Monday, July 22	4:00–5:00 PM	Desert Salon 12
Teaching Methods (TCHG) Working Group	Thursday, July 25	2:00–3:00 PM	Springs Salon C
Undergraduate Student (UG) Working Group	Monday, July 22	8:00–9:00 AM	Desert Salon 12

EXTENSION DIVISION

Extension Division Advisory Council Meeting	Wednesday, July 24	9:00–11:00 AM	Desert Salon 3
Commercial Horticulture (CHEX) Working Group	Tuesday, July 23	4:00–5:00 PM	Desert Salon 3
Consumer Horticulture & Master Gardeners (CHMG) Working Group	Thursday, July 25	10:00–11:00 AM	Springs Salon C
eXtension (EEXT) Working Group	Monday, July 22	1:00–1:45 PM	Desert Salon 11
Extension & Industry Division Breakfast	Tuesday, July 23	8:00–10:00 AM	

INDUSTRY DIVISION

Industry Division Advisory Council Meeting	Wednesday, July 24	11:00 AM–12:00 PM	Desert Salon 3
Extension & Industry Division Breakfast	Tuesday, July 23	8:00–10:00 AM	
Intellectual Property Rights (IPR) Working Group	Wednesday, July 24	12:00–1:00 PM	Desert Salon 3
Marketing & Economics (MKEC) Working Group	Monday, July 22	9:00–10:00 AM	Desert Salon 3

INTERNATIONAL DIVISION

International Division Advisory Council Meeting	Tuesday, July 23	8:00–10:00 AM	Desert Salon 3
Association of Horticulturists of Indian Origin (AHIO)	Wednesday, July 24	12:00–1:00 PM	Desert Salon 11
International Horticultural Consultants (ICON) Working Group	Wednesday, July 24	3:00–4:00 PM	Desert Salon 3
International Horticulture & Issues (IHI) Working Group	Wednesday, July 24	9:00–10:00 AM	Springs Salon C
Tropical Horticultural Crops (TROP) Working Group	Wednesday, July 24	10:00–11:00 AM	Desert Salon 11
Working Group of Asian Horticulture (WGAH)	Wednesday, July 24	11:00 AM–12:00 PM	Desert Salon 11

Members At Large

Federal Partners (FP) Working Group	Tuesday, July 23	3:00–4:00 PM	Springs Salon C
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RESEARCH DIVISION commodity

Research Division Advisory Council Meeting	Monday, July 22	6:00–6:30 PM	Desert Salon 3
Citrus Crops (CITR) Working Group	Wednesday, July 24	3:00–4:00 PM	Desert Salon 12
Floriculture (FLOR) Working Group	Monday, July 22	2:00–3:00 PM	Springs Salon C
Fruit Breeding (FRBR) Working Group	Monday, July 22	4:00–5:00 PM	Springs Salon C
Growth Regulators in Fruit & Nut Production (PGR) Working Group	Monday, July 22	9:00–10:00 AM	Springs Salon C
Herbs, Spices, & Medicinal Plants (HSMP) Working Group	Tuesday, July 23	3:00–4:00 PM	Desert Salon 3
Nursery Crops (NUR) Working Group	Tuesday, July 23	9:00–10:00 AM	Desert Salon 11
Ornamental Plant Breeding (OPB) Working Group	Thursday, July 25	11:00 AM–12:00 PM	Desert Salon 11
Ornamentals/Landscape & Turf (O/LT) Working Group	Monday, July 22	3:00–4:00 PM	Springs Salon C
Pomology (POM) Working Group	Tuesday, July 23	5:00 PM–6:00 PM	Desert Salon 11
Temperate Tree Nut Crops (NUTS) Working Group	Wednesday, July 24	2:00–3:00 PM	Desert Salon 3
Vegetable Breeding (VGBR) Working Group	Tuesday, July 23	9:00–10:00 AM	Springs Salon C
Vegetable Crops Management (VCM) Working Group	Thursday, July 25	10:00–11:00 AM	Desert Salon 11
Viticulture & Small Fruits (VSF) Working Group	Monday, July 22	5:00–6:00 PM	Springs Salon C

RESEARCH DIVISION cross-commodity

Research Division Advisory Council Meeting	Monday, July 22	6:00–6:30 PM	Desert Salon 3
Bioenergy (BioE) Working Group	Tuesday, July 23	9:00–10:00 AM	Desert Salon 12
Crop Physiology (CRPP) Working Group	Tuesday, July 23	3:00–4:00 PM	Desert Salon 11
Environmental Stress Physiology (STRS) Working Group	Thursday, July 25	2:00–3:00 PM	Desert Salon 11
Genetics & Germplasm (GG) Working Group	Tuesday, July 23	10:00–11:00 AM	Desert Salon 11
Growth Chambers & Controlled Environments (CE) Working Group	Monday, July 22	3:00–4:00 PM	Desert Salon 11
Human Issues in Horticulture (HIH) Working Group	Monday, July 22	9:00–10:00 AM	Desert Salon 11
Invasive Plants Research (INPR) Working Group	Tuesday, July 23	4:00–5:00 PM	Desert Salon 11
Local Food Systems (LOCSY) Working Group	Wednesday, July 24	1:00–2:00 PM	Springs Salon C
Organic Horticulture (ORGH) Working Group	Monday, July 22	12:00–1:00 PM	Desert Salon 11
Plant Biotechnology (BTCH) Working Group	Monday, July 22	4:00–5:00 PM	Desert Salon 11
Plant Nutrient Management (PNM) Working Group	Wednesday, July 24	2:00–3:00 PM	Springs Salon C
Plasticulture (PLAST) Working Group	Tuesday, July 23	11:00–12:00 PM	Desert Salon 11
Postharvest (PH) Working Group	Tuesday, July 23	2:00–3:00 PM	Desert Salon 11
Produce Quality, Safety, and Health Properties (QUAL) Working Group	Thursday, July 25	9:00–10:00 AM	Desert Salon 11
Production & Harvest Mechanization (MECH) Working Group	Wednesday, July 24	1:00–2:00 PM	Desert Salon 11
Propagation (PROP) Working Group	Monday, July 22	1:00–2:00 PM	Springs Salon C

Public Horticulture (PUBHORT) Working Group	Monday, July 22	2:00–3:00 PM	Desert Salon 11
Root Growth & Rhizosphere Dynamics (RHIZ) Working Group	Tuesday, July 23	8:00–9:00 AM	Desert Salon 11
Seed & Stand Establishment (SSEST) Working Group	Tuesday, July 23	8:00–9:00 AM	Springs Salon C
Waste Utilization in Horticulture (WUH) Working Group	Thursday, July 25	8:00–9:00 AM	Desert Salon 11
Water Utilization & Management (WUM) Working Group	Wednesday, July 24	8:00–9:00 AM	Desert Salon 3
Weed Control & Pest Management (WCPM) Working Group	Thursday, July 25	12:00–1:00 PM	Desert Salon 11

SPECIAL EVENTS

APS Tropical Fruit Tasting	Wednesday, July 24	3:00–3:30 PM	Springs Salon C
ASHS Opening Plenary Session and William A. (“Tex”) Frazier Lecture	Monday, July 22	10:00 AM–12:00 PM	Springs Salon F
B.Y. Morrison Lecture	Tuesday, July 23	12:00–1:00 PM	Springs Salon A/B
B.Y. Morrison Reception	Tuesday, July 23	1:00–1:30 PM	Springs Salon C
Certified Horticulturist Examination 1	Wednesday, July 24	2:00–6:00 PM	Directors Suite VI
Certified Horticulturist Examination 2	Thursday, July 25	1:00–5:00 PM	Desert Salon 12
Listening Session with Sonny Ramaswamy NIFA Director	Monday, July 22	8:30–9:30 AM	Springs Salon F
Presidential Address and ASHS Annual Business Meeting	Wednesday, July 24	4:00–5:30 PM	Springs Salon F
Extension & Industry Division Breakfast	Tuesday, July 23	8:00–10:00 AM	Springs Ballroom Salons J-L
New Innovations in Commercial Horticultural Applications	Thursday, July 25	8:00–10:00 AM	Springs Salon D/E
Project Leaders – National Strawberry Sustainability Initiative Program	Tuesday, July 23	1:00–2:00 PM	Desert Salon 12
Moderators Training Session	Monday, July 22	9:00–10:00 AM	Springs Salon A/B
Scholars Ignite—Student Competition	Wednesday, July 24	9:30 AM–12:15 PM	Springs Salon A/B
SCRI Project Directors’ Workshop	Monday, July 22	1:00–4:00 PM	Desert Salon 9-10
SRASHS Executive Committee Meeting	Monday, July 22	4:00–6:00 PM	Directors Suite VI
Service Project: Undergraduate Student Activity	Visit registration for more information about the service project.		
USDA–SCRI Eastern Broccoli Project Working Group Meeting	Thursday, July 25	10:00 AM-12:00 PM	Desert Salon 3
USDA–ARS All Employee Meeting	Tuesday, July 23	1:30 PM-2:30 PM	Springs Salon C

BREAKFAST, LUNCHEONS, BREAKS, DINNERS, RECEPTIONS

Administrators Working Group Breakfast	Wednesday, July 24	8:30–10:00 AM	Director Suite III
Break	Monday, July 22	9:30–10:00 AM	Desert Ballroom: Salons 7-8
	Tuesday, July 23	9:45–10:15 AM	Desert Ballroom: Salons 7-8
	Wednesday, July 24	9:45–10:15 AM	Desert Ballroom: Salons 7-8
	Thursday, July 25	9:45–10:15 AM	Registration Foyer
Extension & Industry Division Breakfast	Tuesday, July 23	8:00–10:00 AM	Springs Ballroom Salons J-L
International Division Breakfast	Thursday, July 25	8:00–10:00 AM	Director Suite III
Pi Alpha Xi Luncheon & Annual Meeting	Wednesday, July 24	12:00–1:30 PM	Director Suite III
Student Reception	Wednesday, July 24	7:00–8:00 PM	Springs Retreat Pool (San Jacinto in case of bad weather)
Welcome Reception	Monday, July 22	6:30–7:30 PM	Springs Patio

EXHIBITS, POSTERS, REGISTRATION

Exhibits—Open to attendees:	Monday, July 22	8:30 AM–2:30 PM	Desert Ballroom 7–8
	Tuesday, July 23	8:30 AM–2:30 PM	Desert Ballroom 7–8
	Wednesday, July 24	8:30 AM–2:30 PM	Desert Ballroom 7–8
Exhibitor Set-up	Sunday, July 21	2:00–5:00 PM	Desert Ballroom 7–8
Exhibitor Move-out	Wednesday, July 24	2:30–5:00 PM	Desert Ballroom 7–8
Poster Hall—Open to attendees	Monday, July 22	8:30 AM–5:00 PM	Desert Ballroom 7-8
	Tuesday, July 23	8:30 AM–5:00 PM	Desert Ballroom 7–8
	Wednesday, July 24	8:30 AM–1:45 PM	Desert Ballroom 7–8
Poster Set-up	Sunday, July 21	2:00–5:00 PM	Desert Ballroom 7–8
Poster Removal	Wednesday, July 24	1:45 AM–3:30 PM	Desert Ballroom 7–8
Registration Open:	Sunday, July 21	1:00–5:00 PM	Center & North Registration
	Monday, July 22	7:30 AM–6:00 PM	Center & North Registration
	Tuesday, July 23	7:30 AM–5:00 PM	Center & North Registration
	Wednesday, July 24	7:30 AM–5:00 PM	Center & North Registration
	Thursday, July 25	7:30 AM–3:00 PM	Center & North Registration

TOURS

Tours depart from the Tour Lobby entrance unless otherwise specified.

University Garden Tour	Sunday, July 21	7:30 AM–5:00 PM	Departs (7:30 AM) from the DoubleTree by Hilton Lax-El Segund arrives (5:00 PM) at the JW Marriott Desert Spring
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Sightseeing Tours

Joshua Tree National Park	Wednesday, July 24	7:30 AM–1:30 PM	Tour Lobby
Nursery and Botanical Garden Tour	Sunday, July 21	7:00 AM–6:30 PM	Tour Lobby

Palm Spring Aerial Tram	Monday, July 22	2:00–6:00 PM	Tour Lobby
Palm Springs Art Museum	Tuesday, July 23	2:00–6:00 PM	Tour Lobby
The Living Desert	Thursday, July 25	7:30–11:30 AM	Tour Lobby
Whitewater Preserve & Wind Farms	Tuesday, July 23	8:00 AM–12:00 PM	Tour Lobby

Professional Tours

Coachella Valley Tour	Wednesday, July 24	9:00 AM–12:00 PM	Tour Lobby
Citrus and Tropical Fruits Tour	Sunday, July 21	8:00 AM–5:00 PM	Tour Lobby
Golf Course and Irrigation Tour	Tuesday, July 23	7:00–8:00 AM	Tour Lobby
Landscape and Ornamentals	Wednesday, July 24	7:00–8:00 AM	Tour Lobby
Huntington Gardens	Monday, July 22	7:00 AM–5:00 PM	Tour Lobby
Water Features Tour	Thursday, July 25	7:00–8:00 AM	Tour Lobby

Student Tours

Graduate Student Jeep Tour	Wednesday, July 24	4:00–7:00 PM	Tour Lobby
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STUDENT EVENTS

Student Reception	Wednesday, July 24	7:00–8:00 PM	Tour Lobby
Graduate Student Jeep Tour	Wednesday, July 24	4:00–7:00 PM	Tour Lobby

Graduate

Controlled Environments Student Competition	Tuesday, July 23	6:00–9:00 PM	Springs Salon D/E
Graduate Student Working Group			
Morning Gatherings	Monday, July 22	8:15–8:45 AM	Starbucks J.W Marriott Resort
	Tuesday, July 23	8:15–8:45 AM	Starbucks J.W Marriott Resort
	Wednesday, July 24	8:15–9:45 AM	Starbucks J.W Marriott Resort
	Thursday, July 25	7:15–7:45 AM	Starbucks J.W Marriott Resort
Graduate Student (GRAD) Working Group Business Meeting	Thursday, July 25	8:00–9:00 AM	Springs Salon C
Graduate Student Poster Competition			
Judging Session 1	Monday, July 22	12:15–1:00 PM	Desert Ballroom: Salons 7-8
Judging Session 2	Monday, July 22	1:00–1:45 PM	Desert Ballroom: Salons 7-8
Judging Session 3	Tuesday, July 23	12:15–1:00 PM	Desert Ballroom: Salons 7-8
Judging Session 4	Tuesday, July 23	1:00–1:45 PM	Desert Ballroom: Salons 7-8
Judging Session 5	Wednesday, July 24	12:15–1:00 PM	Desert Ballroom: Salons 7-8
Judging Session 6	Wednesday, July 24	1:00–1:45 PM	Desert Ballroom: Salons 7-8
Scholars Ignite–Student Competition	Wednesday, July 24	9:30 AM–12:15 PM	Springs Salon A/B

Undergraduate

Association of Collegiate Branches (ACB) Annual Business Meeting	Tuesday, July 23	12:30–1:30 PM	Desert Salon 1-2
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Controlled Environments Student Competition	Tuesday, July 23	6:00–9:00 PM	Springs Salon D/E
Horticultural Commodity Judging Contest & Plant Identification Contest Set-up	Tuesday, July 23	7:00–9:00 AM	Springs Salon F
Horticultural Commodity Judging Contest & Plant Identification Contest	Tuesday, July 23	9:00 AM–12:00 PM	Springs Salon F
Plant Identification Contest Written Exam	Tuesday, July 23	9:00 AM–12:00 PM	Directors Suite VI
Service Project: Undergraduate Student Activity	Monday, July 22	10:00 AM–5:00 PM	Center & North Registration Counters
Student Reception	Wednesday, July 24	7:00–8:00 PM	Tour Lobby
Undergraduate Oral Competition	Monday, July 22	12:00–1:30 PM	Desert Salon 1-2
Undergraduate Poster Competition	Monday, July 22	4:00–6:00 PM	Desert Ballroom: Salons 7-8
Undergraduate Student (UG) Working Group Business Meeting	Monday, July 22	8:00–9:00 AM	Desert Salon 12

MEETINGS OF AFFILIATED ORGANIZATIONS

NC1186: Water Management and Quality for Ornamental Crop Production and Health	Monday, July 22	8:00 AM–12:00 PM	Springs Salon D/E
NE-1036 Technical Committee Meeting			
Day 1	Friday, July 26	8:00 AM–5:00 PM	Griffin Room
Day 2	Saturday, July 27	8:00 AM–12:00 PM	Griffin Room
American Pomological Society (APS) Annual Business Meeting	Wednesday, July 24	3:30–4:30 PM	Springs Salon C
American Pomological Society (APS) Executive & Advisory Board Meeting	Tuesday, July 23	6:00–10:00 PM	Desert Salon 3
APS Tropical Fruit Tasting	Wednesday, July 24	3:00–3:30 PM	Springs Salon C
2013 B.Y. Morrison Lecture	Tuesday, July 23	12:00–1:00 PM	Springs Salon A/B
B.Y. Morrison Reception	Tuesday, July 23	1:00–1:30 PM	Springs Salon C
Crucifer Crop Germplasm Committee	Wednesday, July 24	10:00 AM–12:00 PM	Directors Suite VI
Leafy Vegetable Crop Germplasm Committee Meeting	Monday, July 22	8:00–10:00 AM	Directors Suite VI
Pi Alpha Xi Luncheon - Annual Meeting	Wednesday, July 24	12:00–1:30 PM	Room tba
Project Leaders – National Strawberry Sustainability Initiative Program	Tuesday, July 23	1:00–2:00 PM	Desert Salon 12
Root and Bulb Vegetable Crop Germplasm Committee (RBV-CGC) Meeting	Wednesday, July 24	8:00–10:00 AM	Directors Suite VI
SCRI Project Directors' Workshop	Monday, July 22	1:00–4:00 PM	Desert Salon 9-10
SRASHS Executive Committee Meeting	Monday, July 22	4:00 PM–6:00 PM	Directors Suite VI
USDA–ARS All Employee Meeting	Tuesday, July 23	1:30–2:30 PM	Springs Salon C
USDA–SCRI Eastern Broccoli Project Working Group Meeting	Thursday, July 25	10:00 AM–12:00 PM	Desert Salon 3

Graduate Student Poster Competition Schedule

Please note that the Graduate Student Poster Competition Presentation Time may be the same as your scheduled poster presentation time in the ASHS Technical Program. If it is not the same, you must be present at both times.

SESSION 1: Monday, July 22: 12:15 PM–1:00 PM

Desert Ballroom: Salons 7-8

(Poster #) Paper Title	Name and Email	Affiliation
(289) Comprehensive Functional Analyses of Expressed Sequence Tags (ESTs) in <i>Jatropha curcas</i> L.	Wenlan Tian, tianwenl@ufl.edu	Univ. of Florida, Gainesville
(322) Screening for Avocado Resistance to Laurel Wilt using Shoot Cuttings	Cristina Pisani, cpisani@ufl.edu	Univ. of Florida, Gainesville
(329) Micropropagation of the Relict Genus <i>Cercidiphyllum</i> (<i>Cercidiphyllaceae</i>)	Craig Carlson, craig.h.carlson@ndsu.edu	North Dakota State Univ., Fargo
(113) Fertigation with Micronized Sulfur Rapidly Reduces Soil pH in Highbush Blueberry	Khalid Almutairi, almutaik@onid.orst.edu	
(112) <i>Vaccinium arboreum</i> : A Rootstock for Southern Highbush Blueberry?	Bruno Casamali, bcasamali@ufl.edu	Univ. of Florida, Gainesville
(111) Friend or Foe? Bacterial Nitrate and Iron Reduction in the Roots and Rhizosphere of <i>Vaccinium corymbosum</i> and <i>Vaccinium arboreum</i>	Gerardo H. Nunez, g.nunez@ufl.edu	Univ. of Florida, Gainesville
(293) Survival and Persistence of Non-pathogenic <i>Escherichia coli</i> and <i>Escherichia coli</i> O157:H7	Celia D. Whyte, cwhyte@umes.edu	Univ. of Maryland Eastern Shore, Princess Anne
(234) Observation with a Laser and Optical Microscope for Emarginated Fruits Surface of Paprika (<i>Capsicum annuum</i> L.)	Masaya Miyanaga, cf20221@meiji.ac.jp	Meiji Univ., Kawasaki, Japan
(228) Physiological and Biochemical Evaluation of Freezing Tolerance in Three Asparagus Cultivars in Early Spring	Mahmoud Panjtandoust, mpanjtan@uoguelph.ca	Univ. of Guelph, ON, Canada
(226) High Temperature Inhibits the Expressions of Some Genes Involved in Anthocyanin Biosynthesis in Strawberry Sachinoka' Fruit	Takumi Sakayori, cf20209@meiji.ac.jp	Meiji Univ., Kawasaki, Japan
(15) Induction of Variation in the <i>Petunia Mlo</i> Gene for Resistance to Powdery Mildew	Peng Jiang, pjiang@uga.edu	Univ. of Georgia, Athens

SESSION 2: Monday, July 22: 1:00–1:45 PM

Desert Ballroom: Salons 7-8

(Poster #) Paper Title	Name and Email	Affiliation
(282) Blue Light-emitting Diode Treatments Act to Decrease Kale Leaf Tissue Zeaxanthin Concentrations and Non-photochemical Quenching, Thereby Demonstrating a Less Stressful Light Environment	T. Casey Barickman, tbarickm@utk.edu	Univ. of Tennessee, Knoxville
(281) Cucumber Seedlings Growth and Morphology under Supplemental Pulsed Lighting using Light-emitting Diodes	Ricardo Hernandez, ricahdez@email.arizona.edu	Univ. of Arizona, Tucson
(284) Cold Acclimation Attributes among Three Asparagus Cultivars under Controlled Conditions	JaeJoon Kim, jaejoon@uoguelph.ca	Univ. of Guelph, ON, Canada
280) Growth of Lettuce Plants Exposed to Air Anion in a Plant Factory	Min-Jeong Song, hi_kate@nate.com	Chungbuk National Univ., Cheongju, South Korea
(59) Lead Uptake in Radish Cultivars Grown in Lead Contaminated Urban Soils	Tracey Emmerick Takeuchi, ttinsol@aol.com	California Polytechnic Univ., Pomona
(66) Evaluation of the Consumption of Fruits and Vegetables and Socio-economic Status on a Native American Reservation in Kansas	Pabodha G. Galgamuwe Arachchige, pabodha@ksu.edu	Kansas State Univ., Manhattan
(65) Wyoming Brown and Gold Fresh Cut Sunflowers	Andrea R. Garfinkel, agarfink@uwyo.edu	Univ. of Wyoming, Laramie
(39) Evaporative and Transpirational Loss from Three Nursery Container Types	Alison Stoven O'Connor, astoven@larimer.org	Colorado State Univ., Fort Collins
(26) Green Roof Substrate Durability: Particle Size Distribution of Five Mature Mid-Atlantic Green Roofs	Whitney Gaches, wgaches1@umd.edu	Univ. of Maryland, College Park
(68) Phytosanitary Irradiation Maintains Grape Quality under Simulated Transportation and Distribution Conditions	Patty Kraikittikun, pkraikittikun@yahoo.com	Chapman Univ., Orange, CA
(355) Identification of Sparkleberry (<i>Vaccinium arboreum</i>) Genome Introgression with Microsatellite Markers Developed in Highbush Blueberry	Hilda Patricia Rodriguez-Armenta, hildap@ufl.edu	Univ. of Florida, Gainesville
(147) The Effects of Nitrogen Fertilization on Glucosinolate Concentration		

Graduate Student Poster Competition Schedule

and Yield in 28 Cabbage Varieties

Hunter R. Barrier, hrbarrie@ncsu.edu

North Carolina State Univ.,
Raleigh

SESSION 3 Tuesday, July 23, 12:15–1:00 PM

Desert Ballroom: Salons 7-8

(Poster #)	Paper Title	Name, Email	Affiliation
(349)	Characterization of Libyan Olive (<i>Olea Europaea</i> L.) Cultivars using Morphological Data	Salem Abdul, salem.elleaga@yahoo.com	
(347)	Collection of North American Plums (<i>Prunus</i> spp.) for Use As Germplasm and Genetic Resources	Dario J. Chavez, darioch@ufl.edu	Univ. of Florida, Gainesville
(30)	Green Roofs: Water Recycling Effect on Water Quality and Soil Chemistry	Kirk Laminack, kirkdl9@tamu.edu	Texas A&M Univ., College Station
(34)	Granular Fertilizer Formulations Affect Nutrient Uptake in Perennial Ryegrass Turf	Tyler J. Mock, mocktyler@hotmail.com	Univ. of California, Riverside
(55)	Leafy Vegetable and Herb Production and Costs in High Tunnels in the Arid Southwest	Kristen Hanson, hansonk@ag.arizona.edu	
(91)	Quality of Bartlett Pears Subjected to Phytosanitary Irradiation Treatment Followed by Commercial Distribution and Simulated Retail Display	Sokriith Sea, sokriith.sea@gmail.com	Chapman Univ., Orange, CA
(399)	Storability and Phenolic Compounds Profile of Organically Grown Blackberries	Moo Jung Kim, mkim10@ncsu.edu	North Carolina State Univ., Raleigh
(249)	Determining Root Hydraulic Conductance of Container-grown Plants as an Assessment of Root Mass	Lesley A. Judd, lajudd@ncsu.edu	North Carolina State Univ., Raleigh
(158)	Living Mulch Cover Crops on Small Parcels for Urban and Small-scale Applications	Anne Pfeiffer, acpfeiff@wisc.edu	Univ. of Wisconsin, Madison
(154)	Biofumigant Performance of Four <i>Brassica</i> Crops in an Irrigated Chile Pepper Rotation System	Rachel Rudolph, rudolph@nmsu.edu	New Mexico State Univ., Las Cruces

SESSION 4: Tuesday, July 23, 1:00–1:45 PM

Desert Ballroom: Salons 7-8

(Poster #)	Paper Title	Name, Email	Affiliation
(48)	Use of Biocontainers in Pot-in-Pot Nursery Production System	Tongyin Li, litongvvsq@yahoo.com	Mississippi State Univ.
(76)	The Presence of Genetic Modification in USDA Organic Certified Corn and Soy Food Products	Ryan Phelps, ryan.phelps851@topper.wku.edu	
(338)	Rootstock Age Affects Grafting Ability and Rootstock Re-rooting of Grafted Watermelon Transplants	Shawna Daley, sdaley@clemsun.edu	Clemson Univ., Charleston
(335)	Micropropagation of <i>Ostrya virginiana</i> (Mill.) K. Koch	Juan R. Franco Coronado, juan.franco coronado@my.ndsu.edu	North Dakota State Univ., Fargo
(368)	Selection Progress for Reduced Iris Yellow Spot Symptom Expression in Onion	Narinder Singh, narinder@nmsu.edu	New Mexico State Univ., Las Cruces
(114)	Patterns of Variation for Sugar and Organic Acid Composition during Berry Ripening in Cold Climate Wine Grape Cultivars	Soon Li Teh, tehxx010@umn.edu	Univ. of Minnesota, Saint Paul
(118)	The Evaluation of Different Cultural Practices on Scarlet Royal Table Grapes to Determine Postharvest Quality	Victoria Towers, victoriatawers@gmail.com	California State Univ., Fresno
(116)	Chlorine Dioxide Sachets for the Control of Postharvest Decay of 'Crimson Seedless' Table Grapes	Xiaofan Zhao, zhaoxiaofan@mail.fresnostate.edu	California State Univ., Fresno
(117)	The Influence of Post-veraison Foliar Potassium Applications on Table Grape Berry Quality	Sijie Zhu, zsj1101@mail.fresnostate.edu	California State Univ., Fresno
(223)	Influence of Trichoderma Application on Seed Germination and Seedling Biomass of Jamaican Scotch Bonnet Peppers	Luke O. Lee, lollee@umes.edu	Michigan State University, East Lansing

SESSION 5 Wednesday, July 24, 12:15–1:00 PM

Desert Ballroom: Salons 7-8

(Poster #)	Paper Title	Name, Email	Affiliation
(312)	Daily Light Integral Influences Production of Steviol Glycosides	Jennifer Evans, velvet.inveigle@gmail.com	Michigan State Univ., East Lansing
(243)	Remotely Surface Reflectance Data for Irrigation Scheduling of Southern New Mexico Pecan Orchards	Yahia Othman, othman@nmsu.edu	New Mexico State Univ., Las Cruces

Graduate Student Poster Competition Schedule

(362)	Phenotypic Diversity of Individual Sugars, Soluble Solids Content, and Acidity in Rosbreed Apple Germplasm	Yingzhu Guan, yingzhu.guan@email.wsu.edu	Washington State Univ., Wenatchee
(358)	Application of a Standardized Protocol for Fruit Quality Phenotyping in the Arkansas Peach and Nectarine Breeding Program	Alejandra A. Salgado, asalgado@uark.edu	Univ. of Arkansas, Fayetteville
(269)	The Ability of <i>Plectranthus parviflorus</i> and <i>P. ambiguus</i> to Regreen after Micronutrient Deficiency	Christopher Borman, c.borman1231@gmail.com	Univ. of Nebraska, Lincoln
(266)	Buffering Capacity of Substrates with Varying Amounts of Compost and Limestone	Rachel A. Kreis, rachelkreis@gmail.com	
(411)	Postharvest Storage Affects Sweetpotato Water-soluble Vitamin Composition	Wilmer Barrera, wbarrel@lsu.edu	Louisiana State Univ., Baton Rouge
(121)	Muscadine Grapes: Evaluation of Genotypes and Field Fungicide Applications on Postharvest Storage Attributes	Derek W. Barchenger, dwbarche@uark.edu	Univ. of Arkansas, Fayetteville
(124)	Utilizing Pruning and Leaf Removal to Ripen Grapes and Encourage Cold Tolerance in North Dakota	Brittany K. Olson, brittany.J.Korynta@my.ndsu.edu	North Dakota State Univ., Fargo
(126)	Flavonoid Accumulation in Wine Grapes	Ashlyn E. Wedde, awedde@gmail.com	Washington State Univ., Pullman
(122)	Failure Tests of Intact Grape Berry Skins and What They Tell Us About Berry Cracking	Yan Zhuang, yanzh@ucdavis.edu	Univ. of California, Davis

SESSION 6 Wednesday, July 24, 1:00–1:45 PM

Desert Ballroom: Salons 7-8

(Poster #)	Paper Title	Name, Email	Affiliation
(180)	The Effect of Composts on Field Soils Affected By Bacterial Wilt of Edible Ginger in Hawaii	Sharon Motomura, smotomur@hawaii.edu	Univ. of Hawaii, Hilo
(378)	Characterizing Crop Timing and Quality Traits of a <i>Petunia integrifolia</i> × <i>P. axillaris</i> Recombinant Inbred Line Population under Different Temperatures	Wei-Kuang Lin, linweiku@msu.edu	Michigan State Univ., East Lansing
(185)	Do Plants Play a Part in Student Satisfaction?	Amanda Plante, aplante@utk.edu	Univ. of Tennessee, Knoxville
(131)	Characterization of the Relationship of Manganese Nutrition to Photosynthesis of Pecan in the Mesilla Valley, New Mexico	Joshua Sherman, xlr8@nmsu.edu	New Mexico State Univ., Las Cruces
NM	USA		
(160)	Symbiotic Performance of Diverse Cowpea Genotypes on the Delmarva Peninsula	Nadine M. Burton, nmburton@umes.edu	Univ. of Maryland, Eastern Shore, Princess Anne
(163)	Low Tunnels and Shading Influence Total and Marketable Yield of Bell Pepper Fruit	Samuel Day, samuel.d.day@aggiemail.usu.edu	Utah State Univ., Logan
(167)	Influence of Grafting and Planting Density on Fruit Yield and Root-knot Nematode Control in Tomato Production	Ruhiyyih Dyr Dahl-Young, ruhiyyihamelia@gmail.com	
(257)	Response of Mexican Lime to Partial Rootzone-drying: A Water-saving Strategy	Beatriz A. Contreras-Barragan, beacontrerasb@gmail.com	Texas A&M Univ., Kingsville Citrus Center, Weslaco
(265)	Use of Rainfall Simulation to Determine the Persistence and Transport of <i>Escherichia coli</i> and <i>Salmonella</i> in Runoff Water	Tamadour N. Khairi	tnkhairi@umes.edu
(259)	Sensor Integrated Automatic Irrigation System to Reduce Runoff and Nutrient Loss without Affecting Plant Growth	Xueni Wang, wangxuen@msu.edu	Michigan State Univ., East Lansing
(261)	Identification of Plant-endophytic Bacteria from Bell Pepper (<i>Capsicum annuum</i> L.) Grown under Different Production Systems and Water Regimes	Zheng Wang, zheng.wang@uky.edu	Univ. of Kentucky, Lexington

Guide to Exhibitors

Exhibitor booths are located in the Desert Ballroom: Salons 7-8

Agrium Advanced Technologies

Booth # 6

106 King Street, Exeter, CA

Phone: 559-429-9002

E-mail: gbrummet@agriumat.com

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BioChambers Incorporated Booth # 1

477 Jarvis Street, Winnipeg, MB, Canada R2W 3A8

Phone: 204.589.8900

E-mail: info@biochambers.com

Web: www.biochambers.com

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CABI/CSIRO

Booth # 18

Stylus Publishing, 22883 Quicksilver Drive, Sterling, VA 20166

Open to attendees:

Monday, July 22 = 8:30 am – 2:30 pm

Tuesday, July 23 = 8:30 am – 2:30 pm

Wednesday, July 24 = 8:30 am – 2:30 pm

Phone: 404-636-3996

E-mail: patricia@styluspub.com

Web: <http://cabi.styluspub.com/books/features.aspx>

CABI is a not-for-profit international organization that improves people's lives by providing information and applying scientific expertise to solve problems in agriculture and the environment. Our mission and direction is influenced by our member countries who help guide the activities we undertake.

CID BIO-Science, Inc.

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CID Bio-Sciences designs and manufactures scientific instruments for agricultural, environmental, and biotechnological research. CID's mission is to satisfy the needs of researchers by designing instruments that are: reliable, portable, and easy-to-use. CID instruments provide relevant data for: photosynthesis, leaf area, plant canopy analysis, spectroscopy, root imaging and analysis, and ethylene analysis.

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Conviron has been a leading global supplier of controlled environment systems and research greenhouses for nearly 50 years. Our expertise is applied to agricultural biotechnology research applications requiring precise environmental control. With installations in over 80 countries worldwide, our product portfolio includes single and multi-tier reach-in and walk-in plant growth chambers, research growth houses, multi-tier plant production rooms, and related products. Our systems provide precise control of temperature, humidity, CO₂ and light intensity. Conviron also offers a comprehensive suite of value-added services encompassing the entire life-cycle of your project—from early-stage design to installation, project commissioning, and on-going maintenance and support.

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Decagon is the world leader in research grade instrumentation used for irrigation scheduling, fertigation, and plant stress management. Whether you're looking to measure soil–water interactions or canopy characteristics, we have the instrument for you. Stop by our booth to see our new line of spectral reflectance sensors for canopy characterization.

eXtension Booth # 19

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E-mail: tmeisenbach@extension.org
Web: www.eXtension.org

The Consumer Horticulture Community of Practice and Extension Master Gardeners are part of the eXtension initiative. eXtension is an internet-based educational network providing 24/7/365 access to objective, science-based information from land-grant universities and partners nationwide. It is an integral part of and complements the community-based Cooperative Extension System.

Gylling Data Management Booth # 7

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Phone: 605.693.4180; Fax: 605.693.4150
Email: fran@gdmdata.com or staff@gdmdata.com

Web: www.gdmdata.com

Gylling Data Management, selling research management software since 1982 including:

ARM: software to establish, manage, analyze, and report information for crop research trials including individual field and greenhouse research protocol and trial.

ARM ST: summarize and report for a trial series, across locations and/or years.

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Inda-Gro Booth # 20

6176 Federal Blvd. San Diego, CA 92114-1401
Phone: 619.266.4004; Fax: 619.229.9287
E-mail: Darryl@elsmfg.com
Web: <http://www.inda-gro.com>

Inda-Gro Induction lamps are a type of High Output Fluorescent lamp that are known as Electrode-less Fluorescent Discharge Lamps (EFDL). Unlike conventional lamps that require screw in sockets or pins to power up the lamps, the EFDL induction lamp does not rely on a socket or pin connection to power the lamp. Instead EFDL efficiencies derive from being powered by a high frequency electromagnetic field. Without the use of pins, sockets or ballasts to operate the lamp, more energy is converted into usable plant light and not wasted due to the high temperatures and escaping gas inefficiencies that are inherent of lamps requiring electrodes. First introduced and patented in 1891 by Nikola Tesla, induction lamps, while expensive, were always prized for their high lumens per watt; low operating temperatures; crisp color; long lamp life; and low lumen depreciation over their lifetime. Inda-Gro's EFDL Bi-Spectrum lamps have affordably combined the proven benefits of this technology with the unique spectral requirements that are essential for robust plant development. Inda-Gro's custom horticultural phosphor blends are designed to be used as a primary grow light from vegetative on through flowering and budding stages. Moreover our fixtures replace the need for higher wattage fixtures and the lamp changes normally associated with different growth periods. When comparing other types of energy efficient grow lamps, such as LED, your investment in an Inda-Gro fixture will prove to be the longest lasting,

most energy efficient, zero stress, zero maintenance grow lamp you will ever own.

Irrrometer

Booth # 2

P.O. Box 2424, Riverside, CA 92516-2424
Phone: 951.689.1701; Fax: 951.689.1701
E-mail: lindas@irrometer.com
Web: <http://www.irrometer.com>

In 1951, the IRROMETER Company of Riverside, CA, began making tensiometers that were used by soil and plant scientists to measure soil water status in their experiments. The demand for products that helped growers better manage irrigation led to the development of a family of products that measure, sample, and control soil moisture under the trade names IRROMETER (tensiometer) and WATERMARK (electrical resistance granular matrix sensor). All IRROMETER products are designed to improve irrigation water use efficiency. Water is a precious natural resource and for over 60 years the IRROMETER Company has dedicated itself to “*Optimizing Irrigation . . . Maximizing Conservation . . . Worldwide Since 1951.*”

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Spectrum Technologies

Booth # 12

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Improve plant quality by knowing how much light is reaching your plants. The Spectrum DLI 100 Light meter measures the cumulative amount of light received by your plants during a 24-hour period. Spectrum Technologies, Inc., offers affordable devices to measure nutrient levels soil qualities, light, weather, and other factors affecting plant growth. Our WatchDog® weather

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Booth # 10

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Natural Industries is committed to developing patented beneficial microorganisms for the horticulture, agriculture and lawn & garden industries. We take microbial technologies from the discovery phase and run them through a series of development levels to screen out undesirable traits. This ensures our professional and consumer products contain the finest, safest and most specialized microbial strains on the market. Our flagship product, Actinovate AG, is in use all over the world to combat foliar and root diseases in crops.

USDA–NIFA, SARE

Booth # 3

Colorado State University,
Horticulture and Landscape Architecture
Fort Collins, CO 80523
Phone: (970)491-7111; Fax: (970) 491-7748
E-mail: steven.newman@colostate.edu

Web: <http://www.sare.org> Since 1988, Sustainable Agriculture Research and Education (SARE; www.sare.org) has advanced sustainable innovations to the whole of American agriculture through grants and outreach programs. Successful SARE grantees are farmers and ranchers, researchers, educators and others who are engaged in projects that improve the profitability of agriculture; protect the nation’s land and water; and are a force for a rewarding way of life for farmers and ranchers, their communities, and society as a whole. SARE also conducts educational and extension programs in an effort to increase knowledge about—and help farmers and ranchers adopt—sustainable farming practices.

You are cordially invited to attend the

ASHS Awards Ceremony

Ceremony to be held during the

Opening Plenary Session

July 22, 2013

10:00 AM–12:00 PM

Desert Springs J.W. Marriott Resort

Springs Salon F

Palm Desert, California

and includes

recognition of the following awardees:

ASHS Fellows-elect: Class of 2013

2013 ASHS Career Award Recipients

2013 ASHS Publication Award Recipients

ASHS Hall of Fame



James Chester Raulston

James Chester (J.C.) Raulston introduced more plants into culture than any other person in the world. His name, and the reputation he created for the NCSU Arboretum, stands alongside Luther Burbank, Ernest Wilson, and John Bartram. He has touched the lives of thousands of students, many of whom have leadership roles in horticulture throughout the world. The NCSU JC Raulston Arboretum exemplifies what a land grant university can do by adding value and service to local citizens and businesses.

Few have left a legacy as tangible as Raulston—his words of encouragement are the reasons our nurseries and gardens exist today. Tracy Traer, his colleague and closest friend, said of Raulston that “while we live in the third dimension, he cruised easily in the fifth.” C.D. Spangler, president of the 16-campus University of North Carolina system, said of Raulston that he was the kind of person we needed in this community to make things grow. He made friendships grow, he made the status of NCSU grow, and he made plants and trees around the world more appreciated and better understood.

His obituary in the *New York Times** described him as “a generous-spirited giant among horticulturists.” At his memorial service, he was called “the linchpin of the American horticultural community.” Raulston also has been called “America’s Horticultural Ambassador”, a designation he would have rejected—in favor of being remembered simply for the signature with which he ended all his correspondence: “Plan — and plant for a better world.”

*(Published December 24, 1996)

The Horticulture Hall of Fame Award honors distinguished persons who have made extraordinary contributions to horticulture. Its purpose is to educate and inform younger members of the profession and the general public about the important contributions of horticultural pioneers who made significant impacts on horticulture and how their achievements contributed to the science and profession of horticulture and to the greater public good.

ASHS Hall of Fame



Charles E. Hess

University of California, Davis

Charles E. Hess has a distinguished career in horticulture research, academic administration, and state, national, and international agricultural leadership. His research, teaching, and service contributions are in the field of plant propagation. While a graduate student at Cornell, he pioneered the use of mist propagation in the nursery industry. He joined the Department of Horticulture at Purdue in 1958, where he continued his research in the study of naturally occurring substances that promote root initiation. Hess and his graduate students also studied juvenility in plants and tuberization. Since his retirement, Hess has continued research on the role of sphagnum moss in reducing the incidence of “damping off” when used as a germination medium. He isolated and identified tropolone, a fungistatic substance produced by bacteria living in association with sphagnum moss.

Hess became chair of the Department of Horticulture and Forestry at Rutgers University in 1966, Acting Dean of the College of Agriculture and Environmental Science in 1971, and was appointed the Founding Dean of Cook College in 1973. Cook College became one of the most popular colleges on the New Brunswick campus of Rutgers University. In 1975, Hess was recruited by the University of California–Davis to become Dean of the College of Agricultural and Environmental Sciences. While at Davis, Hess became very involved in state, national, and international agriculture and science. He is one of the first horticulturists to have three presidential appointments, two to the National Science Board, the governing board of the National Science Foundation, and one as Assistant Secretary of Science and Education in the U.S. Department of Agriculture. During his tenure as Assistant Secretary, Hess launched the National Research Initiative, USDA’s competitive grants program and promoted a greater investment in biotechnology research. He chaired a National Academy of Science committee to develop a National Strategy for Biotechnology in Agriculture. Upon his return in 1991 to the University of California, Davis, he became Director of International Programs and served on the Board of Trustees of two international agricultural research centers.

Hess was active in his professional societies—ASHS and the International Plant Propagators Society. He served as President of ASHS in 1972 and in that role was instrumental in the move of the headquarters to Alexandria, Virginia. He is an ASHS Fellow, and is a recipient of the Kenneth Post Award for research. He became member of the Plant Propagators Society (PPS) shortly after it was founded and helped it grow into an international organization. He served as editor of the *Proceedings of the PPS* from 1962 to 1970, became President of the Eastern Region in 1969–70, and International President in 1973. Since his retirement, Hess continued to serve the University in a variety of roles including special assistant to the Chancellor, Chairman of the Department of Nutrition, and Interim Vice Chancellor for Research. He is currently a member of the Science Advisory Panel of the Almond Board of California.

Hess is a member of Phi Beta Kappa, a Fellow of the American Association for the Advancement of Science, and received an honorary doctoral degree from Purdue University along with numerous other awards in recognition of his contributions.

ASHS Fellow



Mark Farnham

USDA–ARS, U.S. Vegetable
Laboratory, Charleston SC

Mark Farnham currently serves as supervisory research geneticist, research leader, and location coordinator at the USDA–ARS, U.S. Vegetable Laboratory, Charleston, SC.

Farnham received his BS degree in Agronomy from Ohio State University in 1977, his MS degree in Crop Science from North Carolina State University in 1984, and his PhD in Plant Breeding from the University of Minnesota in 1988. Farnham has had a postgraduate career of 24 years, which began with three years as a Postdoctoral Research Associate in the USDA–ARS Plant Science Research Unit, St. Paul, MN, and has continued as a Research Geneticist at the U.S. Vegetable Laboratory, Charleston, SC, since 1991.

He is widely recognized as an international leader in vegetable *Brassica* genetics and breeding for his groundbreaking work on broccoli with respect to the development of doubled haploid populations, the breeding for host plant resistance to downy mildew, the development of important information on levels of health-promoting minerals in field-grown vegetable heads, the characterization of the chemoprotective attributes often associated this vegetable crop, and the development of unique germplasms that are adapted to high temperature environments. Farnham is also recognized for spearheading successful domestic plant exploration efforts to collect landraces of collards and effectively establishing a significant national collards germplasm collection.

Farnham has been a very active member of ASHS. He has organized six workshops at six separate ASHS annual conferences, served two terms as chair of the ASHS Vegetable Breeding Working Group (2002 and 2013), served four terms as chair of the ASHS Intellectual Property Rights Working Group (2000, 2006, 2008, and 2009), and was an invited speaker at ASHS workshops in 1999 and 2005 and at an ASHS colloquium in 2010. Farnham has also been quite active in commodity organizations, and has served continuously as the chair of the National Crucifer Crop Germplasm Committee since 1999.

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.

ASHS Fellow



Irwin Goldman

University of Wisconsin, Madison

Irwin Goldman is Professor and Chair of Horticulture at the University of Wisconsin–Madison and a faculty member in the Plant Breeding and Plant Genetics program. In the early 1990s, Goldman joined with collaborators in hematology and oncology in the School of Medicine and Public Health to develop a better understanding of some of the unique medicinal properties of onions and garlic. These collaborations led to more than 15 years of research into medicinal traits in crop plants.

Goldman was one of the first U.S. horticulturists to adopt this research direction in the context of a plant breeding program and in partnership with medical scientists. This area has grown dramatically in horticulture worldwide in the past 20 years.

Goldman and co-workers have also been involved in research to improve the pigment concentration in vegetables for use as natural food colorants. These natural food colorants may supplant synthetic dyes for certain food applications and, in some cases, receive improved consumer acceptance. Populations of table beet with elevated levels of betalain pigments were developed by Goldman and co-workers and have been licensed to the food industry for use as a color source. Currently, this colorant is used in a variety of food products in the U.S. and in Europe. From the period 2004–2010, Goldman served in a variety of administrative roles in the College of Agricultural and Life Sciences, including Interim Dean, Vice Dean, and Associate Dean for Research. During this period, he had budgetary and personnel responsibility for a number of college programs. He was also involved in research administration and policy development for the University. Goldman and his students have worked to produce new inbred lines, open-pollinated cultivars, and germplasm for carrot, onion, and table beet. More than 75 licenses for this germplasm are in place with seed companies, national breeding programs, farmer–breeders, and non-profit organizations around the world.

Goldman has developed channels for the public communication of horticultural science in general and for the research work that focuses on crops and human health. One of these is a regular call-in show on Wisconsin Public Radio’s Garden Talk Show. Another close collaboration has been with the National Onion Association to help provide science-based information to consumers, farmers, and processors.

Goldman has taught three horticulture courses for the past 20 years, including World Vegetable Crops, Principles of Plant Breeding, and Techniques of Plant Breeding, along with an honors course in evolutionary biology.

Goldman has been actively involved with ASHS since 1992, serving on several Committees, including the Endowment Fund Committee and the Horticulture Hall of Fame Committee.

The first ASHS Fellows were elected in 1965.

ASHS Fellow



Jude Grosser

University of Florida IFAS
Lake Alfred FL

Jude Grosser received a BA degree in biology from Thomas More College (KY), an MS degree in biology from Morehead State University (KY), and a PhD in plant breeding and genetics from the University of Kentucky, where he was fortunate to be co-advised by biotechnology expert Glenn B. Collins and the late red clover breeder Norman L. Taylor.

His career in citrus breeding and genetics began in 1984 when he was hired at the University of Florida's Citrus Research and Education Center to adapt protoplast fusion and culture techniques to citrus. Since that time, his career has been dedicated to adapting and merging tissue culture-based biotechnologies with conventional citrus breeding as necessary to address all major citrus production problems worldwide, and also strives to develop new scion and rootstock cultivars that will provide growers with new marketing opportunities. Using a team-oriented approach, Grosser's program is integrated with other members of the IFAS/CREC cultivar improvement team that includes Fred Gmitter and Bill Castle. These efforts are now coming to fruition, as the team is in the process of releasing a multitude of new varieties, including processing sweet oranges, seedless mandarins, red pummelos and grapefruit-like hybrids, seedless lemon/lime-like hybrids, ornamentals, and improved rootstocks. Grosser's first two patented releases are the Valquarius™ early-maturing Valencia sweet orange for processing, and Valenfresh™ late-maturing seedless Valencia sweet orange for fresh market or processing—the first ever released citrus cultivars developed by exploiting somaclonal variation.

Grosser is responsible for developing efficient citrus protoplast isolation, culture and fusion techniques that have resulted in the regeneration of somatic hybrid and cybrid plants from hundreds of parental combinations, contributing to both scion and rootstock improvement. These techniques are now a routine part of citrus breeding programs all around the world, and they are also being adapted to other commodities including avocado and grape. Allotetraploid somatic hybrid breeding parents produced in Grosser's program are contributing substantially to the production of new seedless triploids via interploid crosses, and have led to the development of a genetically powerful rootstock breeding program at the tetraploid level. Grosser's program is also extensively involved with citrus transformation, including the development of new transformation methods that use protoplasts or embryogenic suspension culture cells as explant.

Grosser currently has more than 1200 transgenic citrus plants containing 15 different constructs under field evaluation, many showing promise against devastating HLB (huanglongbing or citrus greening disease) and canker.

In 2005, Grosser received the ASHS Outstanding Researcher Award.

ASHS Fellow



Rebecca Grumet

Michigan State University

Rebecca Grumet is an internationally recognized horticulturist known for her use of molecular techniques to examine and elucidate field associated problems. She has been a professor at Michigan State University (MSU) since 1987, after completing a BS at Cornell University, MS and PhD at MSU, and a Postdoctoral Associate position at Duke University. Grumet has significantly improved our understanding of floral and fruit development in *Cucumis* (cucumber and melon), focusing on the role of ethylene production, perception and signaling in the regulation of unisexual flower development, as well as the disease resistance of whole plants and developing fruits. Her international recognition is evidenced by her expansive publishing record, reports to numerous local cucurbit and international meetings, and her serving as organizer of many international meetings.

Grumet is also internationally recognized for an important related interest involving risk assessment research and international development work, supported by USAID and the Gates Foundation. This work with a group of MSU scientists has played a critical role in the education of international scientists and regulatory agencies dealing with the safety of genetically engineered crops, particularly Africa. Drawing upon this expertise, Grumet has created and co-teaches a course entitled “Biotechnology in Agriculture: Applications and Ethical Issues,” as well as co-editing a textbook, *Environmental Safety of Genetically Engineered Crops*.

Grumet’s research output includes an impressive publication record consisting of 62 refereed journal articles, 20 conference proceedings, eight book chapters, and the edited book mentioned above. Grumet has also contributed greatly to graduate and post-graduate mentoring, serving as both the Acting Director for MSU’s Plant Breeding and Genetics Graduate Program and as the Associate Director and Interim Director of MSU’s Graduate Program in Genetics. Within her program, Grumet has served as major professor for 15 PhD students and three MS students, and the career development of 15 Postdoctoral Associates and Visiting Scholars.

Grumet has been an active ASHS member, serving on numerous committees, as an associate editor for *HortScience*, as an elected chairperson of the ASHS Vegetable Breeding Working Group, and as a colloquium speaker. Collectively her group has presented 31 papers/posters at ASHS conferences and published numerous articles in ASHS journals. In 1993, she was a recipient of the ASHS Vegetable Publication Award.

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

ASHS Fellow



James McCreight

U.S. Agricultural Research
Station, Salinas CA

James McCreight has been an ASHS member since 1973. He received his BS degree from The Pennsylvania State University in Horticulture in 1971, MS from University of Connecticut in Plant Science in 1974, and PhD from North Carolina State University in Horticultural Science in 1977. He joined the U.S. Department of Agriculture, Agricultural Research Service at the Imperial Valley Conservation Research Center, Brawley, CA, and relocated to the U.S. Agricultural Research Station, Salinas, CA, in 1979. His research career has focused on breeding and genetics of lettuce and melon research. He was named Location Coordinator and Research Leader of the Salinas Research Station in 1994.

McCreight has served ASHS as associate editor of the *Journal of the American Society for Horticultural Science* (JASHS) and *HortScience* for Breeding and Genetics; as a member of the ASHS Press Editorial Board; twice as chair of the Vegetable Breeding Working Group; thrice as chair of the Genetics and Germplasm Working Group; Cultivar Release Subcommittee to the Publications Committee on Cultivar and Germplasm Release Notice Policy for *HortScience*; assistant editor of the melon and lettuce cultivar lists. He served ASHS and ISHS as co-organizer and co-editor of Symposium 17: Advances in Vegetable Breeding, Proceedings of the XXVI International Horticultural Congress, Toronto, Canada.

McCreight served as chair of the Cucurbit Crop Germplasm Committee that provides guidance to the U.S. National Germplasm System regarding cucurbit germplasm acquisition, maintenance, and distribution from 1984 to the present. He participated in or led four cucurbit germplasm collection and exchange trips to India, China, Republic of South Africa, and Turkmenistan. He served the Cucurbit Genetics Cooperative as chair of the By-Laws Committee, Gene List Committee, Coordinating Committee, and as chair and editor. McCreight served Cucurbitaceae: Breeding and Enhancement of Cucurbits thrice as member of the Scientific Committee, and organizer and editor.

McCreight served the National Lettuce Workshop and International Lettuce and Leafy Vegetable as member of the committee to establish lettuce gene symbols and nomenclature, drafted a germplasm proposal to the National Plant Germplasm System for *Lactuca* collection in their centers of diversity, and was a member of the Organizing Committee for two conferences.

McCreight is known for collection and evaluation of exotic germplasm of lettuce, and melon and other cucurbits with emphasis on host plant resistance to powdery mildew, insect-transmitted viruses, and insects. He released five breeding lines of melon and associated recombinant inbred lines, and three lettuce cultivars.

ASHS Fellow



Ellen Paparozzi

University of Nebraska, Lincoln

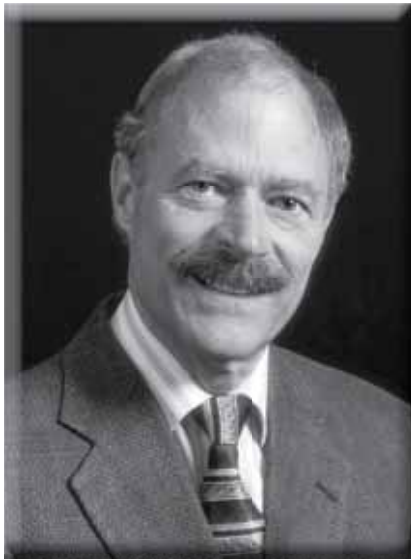
In 1981, **Ellen Paparozzi** was hired to help build a nationally recognized undergraduate horticulture program at the University of Nebraska. Since then, she has been an active participant and leader in the horticulture teaching and research program. She has taught/originated 12 different undergraduate and graduate courses, a major factor in building and maintaining a cutting edge curriculum. She created the first floral industry/university teaching partnership; created and helped build the business/entrepreneurship program and the non-thesis Master's option, was a pioneer in developing Horticulture distance courses including co-authorship for a challenge grant and the first horticulture graduate certificates available through AG*IDEA.

She has written teaching abstracts, made presentations, and published peer-reviewed journal articles (ASHS Education Publication Award, 2008) in horticulture as well as other teaching journals. She has advised over 60 undergraduate horticulture production, science, and honors students and interacted with twice that many through her 30-year role as founder and chapter adviser of the Alpha-Gamma chapter of Pi Alpha Xi. Her lab has served as a research training ground in plant anatomy and nutrition for students from many disciplines. She has mentored over 30 graduate students and published 55 journal and proceedings articles; six book/symposia chapters; 12 book reviews (*HortScience*); and 83 abstracts. She holds one plant patent. She has received more than a half-million dollars in research and teaching grants. In 2011, she was honored for her efforts with the Holling Family Award for Teaching Excellence at UNL.

Paparozzi joined ASHS in 1976 when she was an undergraduate student at Rutgers. Since then she has served on and chaired many ASHS committees (Headquarters Relocation and Ornamentals, Education, and Cross-Commodity Publication Awards). She helped start two working groups, served as a book and article reviewer for all three ASHS journals, co-organized colloquia, and either presented a paper, poster, or chaired a session at 35 of 36 national meetings. Internationally, she presented research at numerous ISHS Congresses. As journal editor for horticulture/applied botany for *Annals of Applied Biology*, she raised awareness of horticulture research as well as the impact factor for this international journal. As President for National Pi Alpha Xi, the horticulture honor society, she changed the responsibilities of contact for initiation, dues, and scholarships from a university professor rotation to a permanent home with ASHS. This action ensured that the opportunity for horticulture students and faculty to be recognized as horticultural scholars will be available—not just now, but in the future.

A roster of all ASHS award winners to date can be found on the website: ashs.org/db/awards/winners/

ASHS Fellow



Robert Stamps

University of Florida, Apopka

Robert Stamps is a professor of environmental horticulture with a diverse extension and research career. He is a world-renowned cut foliage specialist and has shepherded Florida's cut foliage industry for over three decades, helping the industry to dominate U.S. cut cultivated greens production (76% of U.S. total).

Stamps' focus has been to support the ornamental horticulture industry while helping to protect and conserve natural resources. His research on irrigation and nutrient management enabled him to develop the first Nitrate Best Management Practices guidelines for Florida. His unique research on crop cold protection has saved growers tens of thousands of dollars and reduced groundwater withdrawals by trillions of gallons. Stamps has also evaluated and introduced new cut crops that require fewer inputs and new potting medium components.

Due to industry needs, Stamps has conducted weed management research that has helped to register new herbicides for use on ornamental crops that have reduced potential for contaminating groundwater. His extension publications on weed management for ornamental crops continue to be top hits on the Internet. Stamps was named Outstanding Weed Scientist by the Florida Weed Science Society. He also provides training on invasive species control. Stamps also helped improve contaminated groundwater phytoremediation using arsenic hyperaccumulating ferns. Research led to greatly increased arsenic uptake rates and the building of a pilot-scale hydroponic biofiltering system.

Stamps published the first refereed articles on the use of photosensitive netting conducted in the United States and on the efficacy of cellulosic water for maintaining plants indoors. Stamps has co-authored one book, one book chapter, published two monographs, 64 refereed publications, 45 additional scientific articles, more than 325 trade and extension publications, given about 550 presentations, taught seven plant ID classes, and obtained \$2 million in grants.

Stamps has been a member of ASHS since 1980 and has arranged and led workshop tours for working groups at annual meetings; served as chair of the ASHS Ornamentals Publication Award Committee, and co-organizer for ACB and post-conference tours; co-created the Pi Alpha Xi Horticultural Photography Contest and served as chair; chaired the Plant Invasiveness Colloquium Committee; served as ASHS Membership Representative; co-organized two ASHS colloquiums, chaired the Extension Social and Banquet Committee; served as an ASHS publications reviewer, session moderator, and served on the Annual Meeting Committee.

Stamps has been awarded Honorary Membership by the Florida State Horticultural Society and named Outstanding Specialist by the Florida Association of County Agricultural Agents.

ASHS Fellow



Ann Marie VanDerZanden

Iowa State University, Ames

Ann Marie VanDerZanden is Professor of Horticulture, and Director of the Center for Excellence in Learning and Teaching at Iowa State University (ISU). Her academic training is in horticultural science and she earned her BS and PhD from Washington State University, and her MS from Cornell University. Prior to joining the faculty at ISU, she was a faculty member at Oregon State University (OSU, 1997–2003) where she taught courses in landscape design, landscape construction, and herbaceous plant identification, and served as the state coordinator for the OSU Extension Service Master Gardener program. She was on the faculty at Illinois State University from 1995 to 1997, where she taught a range of horticulture courses.

At Iowa State University, VanDerZanden has teaching and extension responsibilities related to landscape design and construction in the horticulture department, and as an extension specialist for the nursery and landscape industry. Her research interests include undergraduate pedagogy, and using new technology to enhance the learning experiences of students and nursery/landscape professionals. She has an extensive publication record on this research and has shared her findings with others through presentations at ASHS and other related professional organizations.

VanDerZanden is a frequent contributor to regional and national horticulture magazines and television programming, and has a significant speaking schedule centered on landscape design, plant selection and sustainability. She has also co-authored three textbooks: *Landscape Design: Theory and Application* (2007); *Mathematics for the Green Industry* (2008); and *Sustainable Landscape Management* (2011).

In 2009 she assumed administrative responsibilities within the Center for Excellence in Learning and Teaching at Iowa State. In this capacity she provides leadership for university-wide teaching and learning initiatives. She also develops and delivers programming focused on becoming an engaged teacher, the scholarship of teaching and learning, and best practices for the peer-evaluation of teaching and interpreting student teaching evaluations.

VanDerZanden has been an active member of ASHS since 1994. She has been a long-term participant in the Teaching Methods Working Group, including chairing the group in 2011. She is a member of the Collegiate Activities Committee and participated in the Community Horticulture & Master Gardener Working Group, 1998–2004. She is currently serving in her 10th year as a consulting editor for *HortTechnology*. She has also been an active member of North American Colleges and Teachers in Agriculture (NACTA) since 1995, and just completed a six-year term as chair of the Educational Issues and Teaching Improvement Committee.

ASHS Career Award

Outstanding Extension Educator



Vincent A. Fritz

University of Minnesota
Southern Research and
Outreach Center

Vincent Fritz's outreach work has had a major impact on grower practices, including the use of high tunnels, selection and culture of vegetable varieties, and management of sweet corn waste. He was part of a three-state faculty leadership team that worked with state food processor associations to form the Midwest Food Processors Association (MWFPA). This led to a combined educational conference (1989 to present) and established the MWFPA competitive research program. In response to a request from the MFPA, Fritz determined the nitrogen value from sweet corn processing waste. Because 66% of processing sweet corn is waste returned to the field, establishing best management practices (BMPs) is important. In collaboration with the University of Wisconsin, new BMPs were endorsed by state regulatory agencies and replaced the previous livestock manure model.

In 2003, Fritz was asked to participate in establishing an Extension program in Senegal to facilitate fresh green bean exports. The results were grower "field days" and meetings that facilitated growers learning from each other. He has also worked with colleagues from Morocco to develop new Extension programming.

Fritz has developed a collaborative research/demonstration project with Minnesota Master Gardeners to characterize phytonutrients in several *Brassica* varieties. This project has effectively engaged MGs in research and given them research-based information in teaching the public. A 2013 Extension publication, will, for the first time, give home gardeners an opportunity to select specific vegetables that will be the highest in potential health benefits.

Fritz developed the "Chemopreventive Café," which teaches the health benefits of fruits and vegetables beyond basic nutrition. Through open houses at research and outreach centers, the University's arboretum, and Mayo Clinic's health fair, the café has reached thousands of consumers and health care professionals.

Fritz is an active member of ASHS Vegetable Crops Management (VCM) and Seed and Stand Establishment (SEST) Working Groups. He is a regular participant in ASHS annual conferences.

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 Graduate Educator



Bhimanagouda Patil

Texas A&M University,
College Station

Bhimanagouda (Bhimu) Patil is Professor and Director of the Vegetable and Fruit Improvement Center (VFIC) at Texas A&M University. Patil is recognized as a leader in the “foods for health” agenda, both nationally and internationally. He runs a large and very productive research program focused on the study of human-health related plant secondary metabolites. Patil has mentored more than 32 graduate students since coming to the department in 2005. His students have all followed his example by exhibiting an eager pursuit of plant bioactive research and publishing their research in appropriate journals.

Patil is passionately committed to teaching and learning. He has dedicated tremendous effort toward the development and implementation of two novel graduate courses at Texas A&M, and five other universities simultaneously. He has developed and maintained websites for both courses. He strives to provide students an understanding of his research information so that they can become role models and teach others.

His keen interest in training students in interdisciplinary sciences is evident from his students’ publication records and their employment in leading research centres and in professional careers. Patil has served as a chair or co-chair for 36 graduate students and on six student committees. His students are now serving in several universities, medical institutions, federal agencies, and in industry. His guidance as an outstanding scientist has also inspired some undergraduate students to continue their education and achieve advanced degrees. He displays a very optimistic attitude in all aspects of his teaching and interaction with students. Patil’s vision is that students can always do better than they first expect with encouragement and guidance, and he is dedicated to teaching and mentoring students to achieve their full potential.

Patil was named a Fellow of ASHS in 2009.

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

ASHS Career Award

Outstanding Undergraduate Educator



Margaret McMahon

The Ohio State University

Margaret McMahon is not afraid of trying new teaching concepts or techniques, some of her own creation, to help students learn. She brings her experience as a professional grower, researcher, and teacher into the classroom to share with the students in the hope they will learn from her experience. Her Student Evaluation of Instruction (SEI) scores are consistently at the 4.5 or higher (out of 5.0) in all categories, including: organized, created learning atmosphere, cared about learning and helping students, encouraged independent thinking, communicated subject matter clearly. Student narratives of her teaching frequently include comments such as: “she is one of the best teachers I have had in college;” “I like how she takes theory and shows how to apply it to the real world;” “her stories about her experiences as a grower help explain/make a point;” “the second chance exams really help me to learn/understand a difficult concept.”

McMahon has advised two student organizations, Pi Alpha Xi and the Landscape and Floriculture Forum, for most of her time at The Ohio State University (OSU). Her advising involves helping the students with agendas, trip planning, fundraising, and other activities. Whenever possible she accompanies the students on their trips, usually at her own expense. She has advised more than 100 undergraduate students who have completed their degrees and gone on to having successful lives.

An ASHS member since 1992, McMahon has been active in the Teaching Methods and Floriculture Working Groups. She has also served on the Graduate Student Activities and Scholarship Awards Committees, among others. She has been the chair of several ASHS committees or working groups dedicated to improving how horticulture is taught. She is also active in OFA — An Association of Horticulture Professionals, where she is involved in planning sessions for the annual Short Course for young OFA members as well as sessions for growers that highlight undergraduate education.

Since 1999 she has been the lead (sole) editor and main author of *Hartmann’s Plant Science*, which is used by many introductory horticulture and agronomy courses in the United States and around the world. The book was written with McMahon’s eye toward making difficult concepts understandable to the beginning student.

When OSU made the transition to semesters very recently, she was the person in the Horticulture and Crop Science Department who led the conversion. Her guidance resulted in a new curriculum that for the first time in over 20 years had horticulture (production) as an option in the major.

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

ASHS Career Award

Outstanding Industry Scientist



Warren Shafer

Valent BioSciences Corporation
Libertyville, IL

The ASHS Outstanding Industry Scientist Award recognizes a horticultural crops scientist working in the private sector who has made outstanding and valuable contributions to horticultural science.

Warren Shafer spent 14 years at Abbott Laboratories, in both Research and Product Development scientific and management positions, working in several areas of the plant growth regulator and ag microbials businesses. During this period he served as the project leader for developing, registering, and commercializing the plant growth regulator active ingredient aminoethoxyvinylglycine (AVG) and its formulated product ReTain® on apples in the United States and several other countries.

The research, development, registration and commercialization of a successful product often is dependent upon the leadership of an individual who guides the active ingredient and formulated product through the various steps required for commercialization. Shafer was the champion behind the development and commercialization of AVG/ReTain. While the naturally occurring AVG molecule was known to be an effective ethylene biosynthesis inhibitor, its high cost prevented its development as an agrochemical product. At Abbott Laboratories, Shafer led the AVG/ReTain project team, developing AVG into a successful commercial product whose application has become a standard practice by apple growers for effective management of apple harvests, improved apple quality, and prevention of fruit drop.

Shafer earned a PhD in Horticulture, with a focus on plant physiology, from Texas A&M University. His major advisor was David Wm. Reed. A portion of his doctoral research program was conducted at the Botanical Research Institute in Munich, Germany, under the direction of Jörg Schönherr. Following completion of his PhD, Shafer spent two years conducting postdoctoral research work on pesticide spray application technology with John Bukovac at Michigan State University. Following his years at Abbott, Shafer held various R&D positions at Cargill and Rennessen. He joined Valent BioSciences in 2006 and currently is Vice President of Global R&D and Regulatory Affairs. In addition to his responsibilities at Valent BioSciences, he is a Board Member of the postharvest company Pace International, LLC.

Shafer is a past-President of the Plant Growth Regulation Society of America (PGRSA) and has also served in various administrative capacities with ASHS. He has also served as a corporate representative to the iBio Institute. Shafer is an author of 15 refereed scientific articles, 15 published meeting proceedings, and 21 published abstracts. He is also a co-inventor on six U.S. patents. In addition to being an active ASHS member, Shafer is currently a member of the American Chemical Society and the Plant Growth Regulation Society of America.

ASHS Career Award

Outstanding International Horticulturist



Craig Yencho

North Carolina State University
Raleigh

Craig Yencho joined the Horticulture Department at North Carolina State University in 2003, leading the Sweetpotato and Potato Breeding and Genetics Program. He has diversified an internationally recognized research group to encompass the development of tablestock, ornamental, industrial, and processing sweetpotato varieties both domestically and abroad.

Yencho's research efforts have produced multiple programs that have directly impacted the international horticultural landscape. He works with the McKnight Foundation Collaborative Crop Research Program developing orange-fleshed varieties of sweetpotato resistant to *Sweetpotato virus disease* (SPV), which is a complex of *Sweetpotato feathery mottle potyvirus* and *Sweetpotato chlorotic stunt crinivirus*, for sub-Saharan Africa. When SPV is present, farmers experience 60% to 100% crop loss, potentially devastating for the local communities. Through the McKnight Foundation and the National Agricultural Research Organization National Crops Resources Unit, beta-carotene rich sweetpotato varieties with resistance to SPV and sweetpotato weevil have been released and distributed throughout Uganda, resulting in large advancements against vitamin A deficiencies and increasing food stability in the region.

Under Yencho, the NCSU Sweetpotato Program has also branched into the highly competitive world of ornamental floriculture, releasing 15 varieties of ornamental sweetpotato (OSP) since 2004, including the 'Sweet Caroline' and 'Illusion' series marketed through Proven Winners. Prior to Yencho's research, the OSP market consisted of a few, non-patented varieties utilized by the landscaping industry. Since the release of the 'Sweet Caroline' series, numerous companies have begun developing their own varieties of OSP, bringing this horticultural crop to a multitude of consumers and broadening interest in sweetpotatos as a whole. NCSU's OSPs are now sold on four continents and include more than 10 countries.

Yencho has been an active ASHS member since 1997.

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



Jack Staub

USDA–ARS Forage and Range
Research Laboratory
Logan, UT

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

Jack Staub is internationally known for the development and application of genetic (quantitative and qualitative) traits, physiological (drought and chilling), and molecular (markers and maps) technologies leading to disease and abiotic stress resistant, high-yielding cucumber and melon germplasm; improving grower and processor profitability. His evaluation of cultural practices identified more effective and efficient production strategies, increasing yield potential via the release of 17 germplasms with disease resistance, unique growth, and novel flowering habits. He implemented and developed marker systems in *Cucumis* that led to the: 1) construction of genetic stocks and genomic characterization of cucumber and melon; 2) elucidation of evolutionary relationships in *Cucumis* and *Cucurbita* species; 3) first estimates of linkage marker/trait relationships [morphological traits, disease resistance loci, and yield components (QTL)] in cucumber and melon; 4) development of methodologies for germplasm diversity assessment; 5) use of molecular markers for plant variety protection in cucumber, and; 6) development and release of genetic stocks broadening the genetic base of cucumber and melon. The significance of this work is demonstrated by the successful application of marker-assisted multi-trait selection in cucumber and the only comprehensive efficacy comparisons between marker-assisted and phenotypic selection in *Cucurbit* species. He has also co-developed (China) the first interspecific fully fertile genetic bridge in *Cucumis* with the release (2011) of novel amphidiploid- ($2n=38$) derived inbred backcross lines (IBL; $2n=14$) suitable for commercial cucumber industry hybrid development.

Staub has worked to enhance the stature of ASHS and horticulture by contributing his editorial expertise (*HortScience*, *Plant Breeding*, *Journal New Seeds*, and *Cucurbit Genetics Cooperative Report*), fulfilling numerous ASHS committee assignments (17), assisting with minority education [Society for the Advancement of Chicano and Native American in Science (SACNAS)], training 21 graduate students (16 PhD and five MS, four of which were minorities), co-chairing cross-society workshops (CSSA, one; and SACNAS, three), and administering national and international course instruction (genetics; Spain, India, China). He has also been inducted as a Fellow of a foreign academic society (China), and has published 150 refereed journals articles, four *HortScience* feature articles, two books, seven book chapters, 26 scientific meeting proceedings, and 42 technical bulletins.

Staub was named an ASHS Fellow in 2001 and is a two-time recipient of the ASHS Cross-Commodity Publication Award (1997 and 2012).

ASHS Publication Awards

Cross-Commodity Publication Award

Trait Diversity and Potential for Selection Indices Based on Variation Among Regionally Adapted Processing Tomato Germplasm

Merk, H.L., S.C. Yarnes, A. Van Deynze, N. Tong, N. Menda, L.A. Mueller, M.A. Mutschler, S.A. Loewen, J.R. Myers, and D.M. Francis

J. Amer. Soc. Hort. Sci. 137(6):427–437

Education Publication Award

**Gardening Increases Vegetable Consumption in School-aged Children:
A Meta-analytical Synthesis**

Langellotto, G.A. and A. Gupta

HortTechnology 22(4):430–445

Extension Publication Award

Costs of Establishing Organic Northern Highbush Blueberry: Impacts of Planting Method, Fertilization, and Mulch Type

Julian, J.W., B.C. Strik, H.O. Larco, D.R. Bryla, and D.M. Sullivan

HortScience 47(7):866–873

Fruit Publication Award

Comparative Studies on the Physiobiochemical, Enzymatic, and Ionic Modifications in Salt-tolerant and Salt-sensitive Citrus Rootstocks under NaCl Stress

Balal, R.M., M.M. Khan, M.A. Shahid, N.S. Mattson, T. Abbas, M. Ashfaq, F. Garcia-Sanchez, U. Ghazanfer, V. Gimeno, and Z. Iqbal

J. Amer. Soc. Hort. Sci. 137(2):86–95

Ornamental Publication

Simple Sequence Repeat Markers from *Cercis canadensis* Show Wide Cross-species Transfer and Use in Genetic Studies

Wadl, P.A., R.N. Trigiano, D.J. Werner, M.R. Pooler, and T.A. Rinehart

J. Amer. Soc. Hort. Sci. 137(3):189–201

Vegetable Publication Award

Characterization of Lateral Root Development at the Onset of Storage Root Initiation in ‘Beauregard’ Sweetpotato Adventitious Roots

Villordon, A., D. LaBonte, J. Solis, and N. Firon

HortScience 47(7):961–968

ASHS Scholar



Janos Arnosky
Texas A&M University

Janos Arnosky talks about his plans for the future.

“I was born and raised on a specialty cut flower farm in central Texas. Horticulture, especially the production of cut flowers, has always been a large part of my life. Upon coming to Texas A&M University in the fall of 2010 I decided to continue expanding my knowledge of the industry by majoring in horticulture with an emphasis in nursery and floral crop production and management. As a student, I have been actively involved with the Texas A&M Department of Horticultural Sciences. I joined the Horticulture Club my first semester at Texas A&M university, and through this club I was introduced to the American Society for Horticultural Science. I have participated in the Association of Collegiate Branches of ASHS and competed in the ACB horticulture commodity judging contest at both Southern Region and National conferences.”

“At the spring of 2012 Southern Region ASHS conference, I was elected Vice President of ACB and have served throughout the past year preparing for the 2013. I am also serving as the student representative for the Department of Horticultural Sciences at Texas A&M. This position involves attending departmental and university sponsored events in order to be one of the student faces of Texas A&M horticulture.

“I am very interested in international travel and horticulture abroad. I have spent time volunteering in Guatemala with the Borlaug Institute for International Development and I am planning to spend the fall semester studying at the Universidad San Francisco De Quito in Quito, Ecuador. While there I hope to travel the country and visit cut flower operations in order to gain a better understanding of international floriculture and how it relates to the cut flower industry in the United States. One of my ultimate goals is to use my education in order to expand the cut flower industry in Texas and the United States as a whole.”

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



Justin Brock

Kansas State University

Justin Brock says, “I have been involved with horticulture my entire life. Some of my earliest memories include gardening with my father. When I was nine, my family moved to a farm in north central Kansas, where my father taught my brothers and me the importance of a strong work ethic. When I graduated from high school, I chose to study horticulture because I liked the emphasis it places on individual plants. Today, I continue to enjoy horticulture because it provides practical applications of scientific principles.”

“Although I enjoy many areas of horticulture, my greatest interest lies in tree care. As a student in the concurrent bachelor/master horticulture program at (Kansas State University) K-State, I have begun researching vegetative propagation methods of *Acer truncatum* (Shantung maple) as part of my master degree. After I graduate, I believe I would enjoy a job as a climbing arborist. Ideally, my future career will include working outdoors, strong camaraderie with my co-workers, and a reputation for responsibility and integrity. I find these qualities readily available in the tree care industry.”

“As I discuss my future beyond the university, I should note that during the past year I have had a growing interest in mission work. I am a Christian, and I desire to tell those around me about my great God, regardless of whether I am at home or abroad. About a year ago, a friend of mine asked me to consider partnering with him as a missionary abroad. After much prayer and consideration, I have decided to join with him in this endeavor. The Lord has blessed me with good health and a sound mind, and I can think of no better way to use these blessings than to spread the knowledge of Him. Unless the Lord closes some doors, I am planning to go abroad after I finish my master degree.”

“The logical question, which now arises, is, How does my interest in missions affect my interest in horticulture? The Lord has given me an interest in horticulture and allowed me the opportunity to earn a master degree. He does all things for a purpose, so I believe that my work abroad will apply horticulture in some form. I look forward to seeing how He intends for me to use my skills in service to Him.”

“In conclusion, receiving a college education is a tremendous privilege, which I value highly. This scholarship will greatly aid me in paying for my education during the 2013–14 academic year. Although it is expensive to study at a university, I believe this investment will pay well in the long run because I have no doubt that horticulture will always be an important part of my life.”

This year, Brock also receives recognition as the ASHS Outstanding Undergraduate Horticulture Student at Kansas State University.

2013 ASHS Outstanding Undergraduate Horticulture Students



Normand Adams
Virginia Polytechnic
Institute & State
University



Frank Balestri
Illinois State University



Justin Bartels
Montana State
University



Benjamin Baum
University of Florida



Justin Brock
Kansas State
University



John R. Bruce
University of Vermont



Michael Cook
Texas A&M University



Maria Cramer
Delaware Valley
College



Jacob Deaver
University of
Minnesota



Scott Dvorak
University of
Nebraska–Lincoln



Kevin Evenson
Texas Tech University



Jeran Brent Guffey
University of
Tennessee

2013 ASHS Outstanding Undergraduate Horticulture Students



Jonathan Gumble
The Pennsylvania
State University



Michelle Leppek
Michigan State
University



Sharon Martinez
New Mexico
State University



David Mettler
North Dakota
State University



Jesse Read
University of
Wisconsin–River Falls



William T. Mears
University of Arkansas



Chelsea VanAcker
Cornell University

The ASHS Outstanding Horticulture Student Awards officially recognizes exceptional undergraduate horticulture students in baccalaureate programs.

Students enrolled in horticulture (including pomology, olericulture, floriculture, and landscape or ornamental horticulture) or in a plant science/crop science department with an emphasis or major in horticulture are eligible.

Thank you to the following people for their efforts in making this a successful conference:

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Kimberly Moore
Aliya Momotaz
Wm. Vance Baird
Kent Kobayashi
Sandra Wilson
Genhua Niu

Feng Chen
Channa Rajashekar

Industry Scientist Award

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Rod Reed
Eugene Blythe
Fred Hulme
Jim McFerson
Nancy Roe
Natalie Bumgarner
Kate Evans

International Horticulturist Award

Max Cheng, *Chair*
Jinhe Bai
Yi Li
Mary Lu Arpaia
Brian Irish
Maurice Ogutu
Craig Campbell
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John Dole
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Donglin Zhang
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Yan Chen
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Cross-Commodity Publication Award

James Syvertsen, *Chair*
John Preece

Gladis Zinati
Wenho Dai
Jun Song
Jack Juvik
Jayesh Samtani

Education Publication Award

Terri Starman, *Chair*
John Dole
Glenn Wright
Cynthia McKenney
Suping Zhou
Xin Zhao
Geno Picchioni

Extension Publication Award

Cheryl Boyer, *Chair*
Julie Newman
Janine Hasey
Robert Polomski
Lucy Bradley
Juanita Popenoe
Franz Niederholzer
Richard Heerema

Fruit Publication Award

Clive Kaiser, *Chair*
Thomas Walters
Rafael Socias i Company
Joshua Klein
Kathleen Anderson
Richard Bell
Rachel Elkins

Ornamentals Publication Award

Anthony LeBude, *Chair*
Sven Svenson
Donald Hodel
Thayne Montague
Yunsong Lai
Joseph Rothleitner
Touria Eaton
Catherine Neal

Vegetable Publication Award

Milt McGiffen, *Chair*
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Day-by-Day Program Schedule

Annual Conference of the American Society for Horticultural Science

July 22–25, 2013

JW Marriott Desert Springs Resort & Spa

Sunday, July 21, 2013

7:00 AM–6:30 PM Tour Lobby

Nursery and Botanical Garden Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

7:30 AM–5:00 PM Tour Lobby

University Garden Tour

Coordinators: Paul Siciliano, sicilian@purdue.edu
Richard A. Criley, criley@hawaii.edu

8:00 AM–5:00 PM Tour Lobby

Citrus and Tropical Fruits Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

1:00–5:00 PM Center & North Registration Counters

Registration Open

2:00–5:00 PM Desert Ballroom: Salons 7-8

Exhibitor Set Up

2:00–5:00 PM Desert Ballroom: Salons 7-8

Poster Set Up

All posters being presented at the conference must be set up on Sunday by 5:00 PM.

Monday, July 22, 2013

7:00 AM–5:00 PM Tour Lobby

Huntington Gardens Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

7:30 AM–6:00 PM Center & North Registration Counters

Registration Open

8:00–9:00 AM Desert Salon 12

Undergraduate Student (UG) Working Group Business Meeting

Yessica Garcia, Chair

The UG Working Group fosters collegiality among undergraduate students in horticultural sciences.

8:00–9:00 AM Desert Salon 9-10

Working Group Chairs and Chairs-elect Business Meeting

Presiding: Paul Bosland

8:00–10:00 AM Directors Suite VI

Leafy Vegetable Crop Germplasm Committee Meeting

Presiding: Beiquan Mou

8:00 AM–12:00 PM Springs Salon D/E

NC1186: Water Management and Quality for Ornamental Crop Production and Health

Coordinator: Sarah A. White, swhite4@clemson.edu

Annual meeting of the NC1186 Multi-State Research Project. Meeting open to any scientists, whether public and private sector, extension professionals, and others who interested in contributing to a nationally based, multi-disciplinary approach to water management. Project focal areas include source water management and quality, irrigation management, runoff water management and quality, substrate and nutrition management, and pathogens and/or crop health management.

8:15–8:45 AM Starbucks at J.W. Marriott Resort

Graduate Student Working Group Morning Gathering

Coordinator: Kristin Abney, kabney22@gmail.com

Why wait until the student events to meet the other graduate and undergraduate students at ASHS this year? Come by and meet them while you grab your morning cup of coffee (or tea).

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

William A. (“Tex”) Frazier Lecture

Back to the Future of Addressing Societal Challenges: Priorities for the Horticultural Sciences from the Local to the Global

Monday, July 22 • 10:00 AM • Springs Salon F



Sonny Ramaswamy
Director, National Institute
of Food and Agriculture

The American Society for Horticultural Science welcomes **Sonny Ramaswamy**, Director of the National Institute of Food and Agriculture at the United States Department of Agriculture (USDA–NIFA) as this year’s William A. (“Tex”) Frazier lecturer.

Ramaswamy was appointed to serve as director of the USDA’s National Institute of Food and Agriculture (NIFA) on May 7, 2012. As part of USDA’s Research, Education, and Extension mission, he oversees NIFA awards funds for a wide range of extramural research, education, and extension projects that address the needs of farmers, ranchers, and agricultural producers. Prior to joining NIFA, Ramaswamy served as dean of Oregon State University’s College of Agricultural Sciences and director of the Oregon Agricultural Experiment Station. He provided overall leadership for the college’s academic programs at the Corvallis campus and OSU programs at Eastern Oregon University in La Grande, for-credit extended education, informal education through the Agricultural Sciences and Natural Resources Extension Program, and research at OSU’s main campus and 11 branch experiment stations throughout the state.

Previously, Ramaswamy was associate dean of the Purdue University College of Agriculture and directed the university’s agricultural research programs from 2006 to 2009. Prior to joining the Purdue faculty, Ramaswamy was head of Kansas State University’s Department of Entomology from 1997 to 2006, where he held the title of Distinguished Professor and was named the Presidential Outstanding Department Head in 2002. He also served on the faculty of Mississippi State University and as a research associate at Michigan State University. As an insect physiologist, he worked on the integrative reproductive biology of insects.

Ramaswamy has received research grants from many federal agencies, including USDA, National Science Foundation, National Institutes of Health, Environmental Protection Agency, and the United States Agency for International Development, as well as from state agencies, commodity groups, and industry. He has published nearly 150 journal articles, book chapters, and a book. He has received a number of awards and honors as a scientist and department head, including being named a Fellow of the American Association for the Advancement of Science; Fellow of the Entomological Society of America; and Distinguished Graduate Alumnus of Cook College, Rutgers University.

He received a Bachelor of Science in agriculture and a Master of Science in entomology from the University of Agricultural Sciences, Bangalore, India, and his doctorate in entomology from Rutgers University. He is also a graduate of the University of Nebraska’s New Academic Chair’s Program and Harvard University’s Management Development Program.

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.”

Monday, July 22, 2013

8:30–9:30 AM

Springs Salon F

Listening Session with the Director

Speaker: Sonny Ramaswamy, Director, National Institute of Food and Agriculture (NIFA)

This is an opportunity to ask questions of the new Director and to describe horticultural needs and opportunities as they relate to NIFA programs and potential programs. This will be an informal conversation with the Director.

8:30 AM–2:30 PM

Desert Ballroom: Salons 7-8

Exhibits Open

8:30 AM–5:00 PM

Desert Ballroom: Salons 7-8

Poster Hall Open

9:00–10:00 AM

Springs Salon C

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

Anish Malladi, *Chair*; Derek D. Woolard, *Chair-elect*; Holly Little, *Secretary*

The PGR Working Group fosters excellence in plant growth regulator research; helps and encourage new research talent in plant growth regulators; and unifies research and industry workers in an attempt to solve horticultural problems related to plant growth regulator research between ASHS and other related organizations.

9:00–10:00 AM

Desert Salon 11

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.

9:00–10:00 AM

Desert Salon 3

Marketing and Economics (MKEC) Working Group Business Meeting

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

Objectives of the MKEC Working Group are to bring together workers having horticultural and economic interests in the marketing of horticultural crops and to expand markets and improve marketing techniques for horticultural crops.

9:00–10:00 AM

Springs Salon A/B

Moderators Training Session

Presiding: Carl E. Sams

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

10:00 AM–12:00 PM

Springs Salon F

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

Keynote Speaker:

Sonny Ramaswamy

Director, National Institute of Food and Agriculture, U.S. Department of Agriculture, Washington, DC

Title:

Back to the Future of Addressing Societal Challenges: Priorities for the Horticultural Sciences from the Local to the Global

(See inset on previous page)

Also during the Opening Plenary Session:

ASHS 2013 Awards Ceremony

Presiding: Paul Bosland, ASHS President

Presentation of ASHS Professional Awards for 2013.

12:00–1:00 PM

Desert Salon 3

Emeriti (EMER) Working Group Business Meeting

Blanche Dansereau, *Chair*; Arlie Powell, *Chair-elect*

The EMER Working Group provides a forum for retired horticulturists where some issues of concern to ASHS can be defined, analyzed, and acted on. The objective of this group is to establish and identify an accessible reservoir of research, extension, and teaching talent that may be called on for help and guidance. Attendees are invited to pick-up a lunch and join Emeriti members in an informal meeting.

12:00–1:00 PM

Desert Salon 11

Organic Horticulture (ORGH) Working Group Business Meeting

Xin Zhao, *Chair*; Monica Ozores-Hampton *Chair-elect*; Bill Evans, *Secretary*

The ORGH Working Group aims 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.

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

Monday, July 22, 2013

12:00–1:30 PM

Desert Salon 1-2

Undergraduate Student Oral Competition

Moderator: Yessica Garcia

Coordinator: David Kopsell

12:00–12:15 PM

A Semiyearly Study on the Effect of Light Quality on Flavor of Greenhouse Grown Tomatoes: LED Versus HPS

*Michael Dzakovich, Celina Gomez, Cary A. Mitchell

12:15–12:30 PM

Physiology of *Solanaceous* Scion and Rootstock Seedlings for Grafting in Low Temperature Storage Conditions under Low Light Intensity

*Diana Vercillo, Hans Spalholz, Chieri Kubota

12:30–12:45 PM

Comparisons of Auxin Application Methods and Rates on Rooting of Perennial Cuttings

*Victoria Neff, Mara Grossman, John R. Freeborn, Holly L. Scoggins

12:45–1:00 PM

Drought Stress Tolerance Induced in Ornamental Plants through Foliar Application of Synthetic Abscisic Acid (s-ABA)

*Adam Ingrao, Lauren C. Garner

1:00–1:15 PM

Elicitation of Physiological Stress and Kaempferol Accumulation in Soybean by Sugar Treatment

*Amber Cook, Demetrius Onuaguluchi, Jeremiah Jackson, Bradley Patterson, Lindsey Gilbert, Shannon Combe, Shubha Ireland, Syed Muniruzzaman, Stephen Boue, Harish Ratnayaka

1:15–1:30 PM

Studying the Market Potential for Specialty Cultivars of Sunflower, *Helianthus annuus*, Cut Flowers

*Kathryn Short, Tina Waliczek Cade, Jayne M. Zajicek

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Bioenergy

(288) In Vitro Pollination and Pollen Germination of *Moringa oleifera* Lam. Growing under Sub-optimal Growing Conditions in Gauteng, South Africa

*Elsa DuToit, P.J. Robbertse, T. Tshisaphungo

(289) Comprehensive Functional Analyses of Expressed Sequence Tags (ESTs) in *Jatropha curcas* L.

*Wenlan Tian, Jianping Wang, Wagner Vendrame

(290) Variability in Salt Tolerance of 10 Sorghum Genotypes

*Youping Sun, Genhua Niu, Pedro Osuna, Gary Peterson

(291) Evaluating Sweet Sorghum Germplasm for Maturity in Arizona

Valerie H. Teetor, *Daniel Johnson, Carl L. Schmalzel, Dennis T. Ray

(292) Lesquerella Yield and Oil Quality Response to N Fertilizer Rate and Irrigation

*Guangyao (Sam) Wang, William B. McCloskey, Kevin Bronson, Kelly Thorp, Dennis Ray

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Floriculture

(001) Storage Time of Pine Wood Chip Aggregates Affects Phytotoxicity and Plant Growth

W. Garrett Owen, *Brian Jackson, William C. Fonteno

(003) Use of Plastic Trays to Reduce Irrigation Demand of Biocontainers

*Andrew Koeser, Guihong Bi, Michael R. Evans, Robert L. Geneve, Krista Jacobsen, Susmitha Nambuthiri, J. Ryan Stewart, Sarah T. Lovell

(004) Vesicular–Arbuscular Mycorrhizae and Trichoderma Application Influenced Growth and Development of Poinsettia

*Corrie P. Cotton, Fawzy M. Hashem, Lurline E. Marsh

(005) GA/ABA Ratio Affects Breaking Dormancy of Uncooled Herbaceous Peony

Yong Ha Rhie, *Seung Youn Lee, Ju-hyun Park, Ki Sun Kim

(006) Breeding by Interspecific Crosses and Its Bulb Production in *Lilium* spp.

*SeungDeok Kim, JuHyung Kim, JongWon Lee, KiYeol Lee, Taejung Kim, Kee Yoeup Paek

(007) Evaluation of Bioplastic-coated Fiber Containers for Greenhouse Grown Plants

*James Schrader, Kenneth McCabe, Gowrishankar Srinivasan, David Grewell, Samy Madbouly, Michael Kessler, William Graves

(008) Application of Thidiazuron, a Non-metabolized Compound with Cytokinin-like Activity, Improves the Quality of Potted Tulip Plants

*Yanlong Zhang, Michael S. Reid, Cai-Zhong Jiang

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

Monday, July 22, 2013

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Genetics and Germplasm

(339) Flow Cytometry and DNA Microsatellite Analysis Detect and Identify Triploid Pyrus Cultivars

*Daeil Kim, J. Postman, April Nyberg, Nahla V. Bassil, Richard L. Bell

(340) Identification of Lettuce (*Lactuca sativa* L.) Cultivars using Newly Developed EST-SSR

Markers

*Jee-Hwa Hong, Yong-Sham Kwon, Keun-Jin Choi, Doo-Hwan Kim

(341) The Verticillium Resistance 1 (*Vr1*) Gene from Cultivar La Brillante Determines Resistance in Different Lettuce Cultivars

*German Sandoya, Krishna V. Subbarao, Richard W. Michelmore, Ryan J. Hayes

(342) Development of Novel Microsatellite Markers and Construction of a Microsatellite Database Containing 288 Radish (*Raphanus sativus* L.) Commercial Cultivars in Korea

*Yong-Sham Kwon, Jee-Hwa Hong, Kyung-Mi Bae, Keun-Jin Choi

(343) Genetic Structure in a Core Subset of *Pinus massoniana* Lamb. Germplasm

Mohua Yang, Zhihui Li, Donglin Zhang, Xiaorong Tang, *Yujie Yang, Kun Shi, Qian Wang, Dangquan Zhang

(344) Genetic Relationships of *Michelia* L. Species Revealed from ISSR Markers

*Yujie Yang, Donglin Zhang, Xiaoling Jin, Mohua Yang, Jiwu Cao, Zhihui Li

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Graduate Student Poster Competition—Session 1

Sign up at the time of abstract submission was required. Full competition schedule begins on p. 16.

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Human Issues in Horticulture

(203) Determining the Effects of Mutual Interaction in Horticultural Activity on Acceptance of Children toward Children with Disabilities and Improvement of

Language Capability for Children with Disabilities

*Sin-Ae Park, Kyung-Ui Lee, Ju-Hee Kim, KiCheol Son

(204) Hydroponics Program for Improving Work Adjustment Skills in Students with Mental Retardation

*Sin-Ae Park, Byung-Sik Jyu, KiCheol Son

(205) Determining Metabolic Costs of Gardening and Typical Physical Activities in Children

*Sin-Ae Park, A-Young Lee, Ho-Sang Lee, Kwan-Suk Lee, Ki-Cheol Son, Candice Shoemaker

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Plant Biotechnology

(314) Purple Citrus? Utilization of Myb-related Transcription Factor Genes for Anthocyanin Production

*Manjul Dutt, T. Li Zhijian, Dennis J. Gray, Fred Gmitter, Jude W. Grosser

(315) Marker Free Plants using Bxb1-Mediated Site-specific Recombination Driven by a Seed-specific Promoter

Frank Y. Yau, Mona Easterling, *Kevin Y. Wang

(316) Clustering of Differentially Expressed Genes from Transcriptome of *Vitis flexuosa*

Soon Young Ahn, Seon Ae Kim, Seung Heui Kim, *Hae Keun Yun

(317) Gene Regulation Analysis of Alpha-linolenic Acid Metabolism in Fatty Acid Development of *Camellia oleifera* Seeds

Jiang Nan, Xiao-Feng Tan, *Donglin Zhang

(318) Characterization of Ferric Reductase Oxidase (FRO) Genes in *Populus tremula* L.

Danqiong Huang, *Wenhao Dai

(319) Expression of FER-Like Iron Deficiency-Induced Transcription Factor (FIT) in *Populus tremula* L.

Danqiong Huang, *Wenhao Dai

(320) Cloning and Characterization of a Stearoyl-Acyl Carrier Protein Desaturase Gene from Tung Tree (*Vernicia fordii*)

Lin Zhang, Min Liu, Xiao-Feng Tan, *Hongxu Long, Donglin Zhang, Qirui Wang, Zhibo Song, Baoguang Jia

(321) Assessment of Genetic Diversity of *Commiphora wightii* (Guggal) Germplasm in Rajasthan using RAPD and ISSR Markers

Priyanka Vyas, *Ramesh Joshi, M.L. Agarwal, Dilip Nandwani

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

Monday, July 22, 2013

(322) Screening for Avocado Resistance to Laurel Wilt using Shoot Cuttings

*Cristina Pisani, Mark A. Ritenour, Gloria A. Moore, Ed Stover

(323) Tomato Genotype-specific Biomarkers under Salinity Stress

*Monther Sadder, Abdulla A. Alsadon, Mahmoud Wahb-Allah

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Postharvest

(383) Use of Gamma Radiation as an Alternative Method for Mite Control in Postharvest Storage of Garlic Bulbs (*Allium sativum*) Cv. Perla

Ana Devi Saavedra-Arriaga, Ana Luisa Ríos-Hernández, Miguel David Dufoo-Hurtado, Dalia Vázquez-Celestino, Teresita Guevara-Figueroa, Humberto Ramos, Sr., Gisela K. Rodríguez-Lerma, Hostilio Torres-Robles, Santiago Vergara-Pineda, Ma Estela Vázquez-Barrios, *Edmundo Mercado-Silva

(384) Effect of Nitric Oxide, Microperforated Packages, and Ionizing Radiation on Postharvest Quality of Mango (*Mangifera indica* L.) cv. Manila

Humberto Ramos, Sr., *Edmundo Mercado-Silva, Ma Estela Vázquez-Barrios, Eduardo Castaño-Tostado, Rosalía Reynoso-Camacho, Ramón Álar Martínez-Peniche

(385) Storage Life and Eating Quality of ‘Bartlett’, ‘Comice’, ‘Bosc’, ‘Forelle’, and ‘Anjou’, But Not ‘Starkrimson’, Could Be Improved by Modified Atmosphere Packaging

*Yan Wang, David Sugar

(386) Respiration and Quality Responses of ‘Bing’ Sweet Cherry to Different Atmospheres during Cold Storage and Shipping

*Yan Wang, Lynn E. Long

(387) Effects of Modified Atmosphere Packaging and Irradiation on the Quality of Blueberries under Simulated Commercial Transportation and Retail Conditions

*Jonathan Tong

(388) Effect of Preharvest Bagging and Postharvest 1-Methylcyclopropene (1-MCP) Treatment on the Fruit Quality Attributes in Cold Stored ‘Gamhong’ Apple

*Hun-Joong Kweon, Moo-Yong Park, Yang-Yik Song, Mok-Jong Kim, In-Kyu Kang, Jinwook Lee, Jinsu Lee

(389) An Objective Method to Measure the Peelability of Citrus Fruit

*Mark A. Ritenour, Cassie Young, Macselynia Hossain, Cuifeng Hu

(390) Controlled Atmosphere Storage Reduces Deterioration Rate of Pomegranate (*Punica granatum* L.) Fruit

Harwinder S. Sidhu, Dan MacLean, Smiljana Goreta Ban, Mira Radunic, Erick Smith, Anthony Bateman, *Juan Carlos Diaz-Perez

(391) A Link between Water Quality and Bacterial Growth in Christmas Tree Stands with Postharvest Needle Abscission in Balsam Fir

Mason MacDonald, *Rajasekaran Lada

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Propagation

(324) Use of Unrooted Grafted Vegetable Cuttings: II. Shipping Trials Report

*Mark A. Kroggel, Chieri Kubota

(325) Artificial Seeds in Asiatic Lily

*Kedong Da, Hannah Farish-Williford, Samantha Smith, Barry Flinn

(326) Plant Regeneration and Somatic Embryogenesis in Amaryllis, *Hippeastrum* Hybrids, and *H. papilio*

*Song Zhang, Barry Flinn

(327) Micropropagation of Four Species of Hellebore (*Helleborus*) and Their Commercialization

*Song Zhang, Barry Flinn

(328) Micropropagation of *Corymbia ptychocarpa*

*Yan Yang, Lijuan Jiang, Ruihui Wang, Mingliang Luo, Qiang Liu, Xiang Yin, Youping Sun

(329) Micropropagation of the Relict Genus *Cercidiphyllum* (*Cercidiphyllaceae*)

*Craig Carlson, Todd P. West

(330) Somatic Embryogenesis of *Symplocos paniculata*

*Yan Yang, Changzhu Li, Zhihui Li, Youping Sun, Lijuan Jiang, Peiwang Li, Jingzhen Chen

(331) Micropropagation of *Lycium barbarum* through Single Nodal Explants and Seeds from Mature Plants

*Ronald R. Muse, Barbara D. Muse

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

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Vegetable Crops Management

(133) Light Source Effects on Hydroponically-grown Miniature ‘Little Gem’ Lettuce

*Kent D. Kobayashi, Teresita D. Amore

(134) Weed Control in Okra [*Abelmoschus esculentus* (L.) Moench] in the U.S. Virgin Islands

*Dilip Nandwani

(135) Root-knot Nematode Damage to Low Desert Bell Pepper

*Oli G. Bachie, Antoon Ploegg, Jose Luis Aguiar

(136) A Sampling Network for Insect Pests of Potato in the Columbia Basin of Washington and “Potato Pest Alerts”

*Carrie H. Wohleb

(137) Field Chili and Sweet Pepper Cultivar Evaluation in Central Missouri

Steven Kirk, *Catherine Bohnert, Sanjun Gu

(138) Watermelon Variety Evaluations in Central, Southeast, and Southwest Missouri

*Catherine Bohnert, Nahshon Bishop, Steven Kirk, Sanjun Gu

(139) Multisite Evaluation of Pumpkin Cultivars in Missouri

*Sanjun Gu, Catherine Bohnert, Steven Kirk, Tim Reinbott

(140) Growth and Yield Comparisons among Sweet Pepper Cultivars in South Korea

*Jae-Keun Choi, Hyun-Taek Seo, Young-Jin Kim, Heesun Noh, Dae-Ki Hong, Sun-Bai Bang

(141) Muskmelon Production in Southern New England

*Rebecca N. Brown, Mina Vescera

(142) Herbicide Activation with Drip Irrigation in Celery

*Oleg Daugovish, Cameron Chandler

(143) Influence of Exogenous Uniconazole Application on Grafted Tomato Transplant Production

Shuan Hao Teo, *Xin Zhao, Craig A. Campbell, Stephen M. Olson

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Viticulture and Small Fruits

(108) Mow-down and Tip Pruning Management of Primocane Blackberries in Coastal California

*Mark Gaskell, Mark Bolda, Oleg Daugovish, Anna D. Howell, Randy Long

(109) Nutrient Dynamic in Rabbiteye Blueberry (*Vaccinium ashei* Reade)

*Ana Maria Castillo, Edilberto Avitia, Joel Pineda, Luis Alonso Valdez

(110) Developing a Genotyping by Sequencing Protocol for Linkage Map Construction in Black Raspberry

*Jill M. Bushakra, Nahla Bassil, Michael Dossett, Todd Mockler, Douglas Bryant, Mary Peterson, Chad E. Finn

(111) Friend or Foe? Bacterial Nitrate and Iron Reduction in the Roots and Rhizosphere of *Vaccinium corymbosum* and *Vaccinium arboreum*

*Gerardo H. Nunez, Carrie L. Harmon, Anne Vitoreli, Rebecca L. Darnell, James W. Olmstead

(112) *Vaccinium arboreum*: A Rootstock for Southern Highbush Blueberry?

*Bruno Casamali, Rebecca L. Darnell, Jeffrey G. Williamson

(113) Fertigation with Micronized Sulfur Rapidly Reduces Soil pH in Highbush Blueberry

*Khalid Almutairi, David R. Bryla, Rui M.A. Machado

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Waste Utilization in Horticulture

(293) Survival and Persistence of Non-pathogenic *Escherichia coli* and *Escherichia coli O157:H7*

*Celia D. Whyte, Corrie P. Cotton, Fawzy M. Hashem, Manan Sharma, Patricia Millner

(294) Reducing Cadmium Phytoextractability by Coal Bottom Ash

*Hyun-Moo Shin, Jeongmin Suh, Chang-Ho Hong, Jumsoon Kang, Kyung-Ho Jin, Shin-Mook Kang

(295) Relationship of Soil Organic Matter and the Stability of Soil Carbon

*Hyun-Moo Shin, Jeongmin Suh, Jae-Hwan Cho, Chang-Ho Hong, Jumsoon Kang, Shin-Mook Kang

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

Monday, July 22, 2013

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Computer Applications in Horticulture

(181) Use of Simulation Modeling Software in Support of Container Nursery Process Improvement in the Gulf South

*Scott Langlois

(182) Ebooks: A New Platform for Extension Outreach

*Sarah A. White, Amy Fulcher, Anthony LeBude, Steven Frank, Frank Hale, William E. Klingeman, Craig Adkins, Kris Braman, Matthew Chappell, Juang-Horng (JC) Chong, Jeffrey F. Derr, Winston C. Dunwell, Gary W. Knox, Mathews L. Paret, Joseph C. Neal, Nicole A. Ward, Jean Williams-Woodward, Alan S. Windham

(183) Iphone/Ipad Apps for Extension

*Kent D. Kobayashi

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Environmental Stress Physiology

(225) Analysis of the Purslane (*Portulaca oleracea* L.) Transcriptome under Drought Stress

*Sarah Weeda, Shuxin Ren

(226) High Temperature Inhibits the Expressions of Some Genes Involved in Anthocyanin Biosynthesis in Strawberry ‘Sachinoka’ Fruit

*Takumi Sakayori, Kohei Matsusita, Takashi Ikeda

(227) Temperature Effects on Sweetpotato Growth and Development

*K.R. Reddy, Bandara Gajanayake, Mark Shankle, Ramon A. Arancibia

(228) Physiological and Biochemical Evaluation of Freezing Tolerance in Three Asparagus Cultivars in Early Spring

*Mahmoud Panjtandoust, David Wolyn

(229) Changes in Cold Hardiness, Carbohydrate Content, and β -Amylase Gene Expression of *Prunus persica* during Cold Acclimation and Deacclimation

*Hyunsuk Shin, Keum-Sun Kim, Youngjae Oh, Sung-Il Oh, Seok Kyu Yun, Daeil Kim

(230) The Effect of Deacclimation and Reacclimation on Cold Tolerance, Carbohydrate Levels, and β -Amylase Gene Expression in *Prunus persica*

*Hyunsuk Shin, Youngjae Oh, Keum-Sun Kim, Sung-Il Oh, Seok Kyu Yun, Daeil Kim

(231) Diurnal Root Zone Temperature Fluctuations Affect Strawberry Water Relations, Growth, and Fruit Quality

*Jose Antonio Gonzalez-Fuentes, Richard Y. Evans, Kenneth Shackel, Heiner Lieth

(232) Establishment on the Application Times of Foliage Spray with CaCl_2 for Water Core Reduction in Apple

*Sung-Hee Lee, Ikjei Kim, Yeu Seok Kwon, Ki Youl Lee

(233) Identification and Characterization of the Causal Agent of Gummy Stem Blight from Melon in East China

*Pingfang Li, Xingping Yang, Runsheng Ren, Jinghua Xu, Guang Liu, Xiefeng Yao

(234) Observation with a Laser and Optical Microscope for Emarginated Fruits Surface of Paprika (*Capsicum annuum* L.)

Takashi Ikeda, *Masaya Miyana, Yamanaka Kumi, Takuya Kawamura

(235) Phenotypic Correlation between Yield Components and Responsive Genes under Salinity Stress for Tomato Lines

*Mahmouad Wahb-Allah, Abdulla A. Alsadon, Monther Sadler

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Floriculture

(009) The Effects of Tree Harvest Season and Storage Method on Plant Growth in a Pine Tree Substrate

*Brian Jackson, Robert D. Wright

(010) Development of New Integrated Biological Control Technique against Western Flower Thrips Infesting Chrysanthemum in Korea

*Eunhye Ham, Jeung Sul Han, Jun Seok Lee, Yong Seok Choi, Jong Kyun Park

(011) Optimal Postharvest Handling Procedures of *Eremurus* ‘Line Dance’ and ‘Tap Dance’

*Iftikhar Ahmad, John M. Dole, Flavia Schiappacasse, Muhammad Saleem

(012) The Effect of Growth Regulator Addition on Bulb Cultivation in Interspecific Hybrid Lilies

*SeungDeok Kim, JuHyung Kim, JongWon Lee, KiYeol Lee, Taejung Kim, Kee Yoeup Paek

(013) Harvest Time and Cold Storage Duration of *Lilium* Oriental Hybrid Bulbs Affects Their Morphological Characteristics and Sugar Contents

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

Monday, July 22, 2013

*Jiseon Kim, In Sook Park, Kyung Jin Cho, Wook Oh
(014) Evaluation of Two Different Irrigation and Fertilizer Applications on Dianthus ‘Telstar™ White’ and ‘Telstar™ Red’

*Bruce Dunn

(015) Induction of Variation in the Petunia Mlo Gene for Resistance to Powdery Mildew

*Peng Jiang, Yihua Chen, Dayton Wilde

(016) Field Performance of Transplants Grown using Light-emitting Diodes (LEDs)

*Meriam Karlsson, Cameron Willingham

1:00–1:45 PM

Desert Ballroom: Salons 7-8

**Graduate Student Poster Competition—
Session 2**

Sign up at the time of abstract submission was required.

Full competition schedule begins on p. 16.

1:00–1:45 PM

Desert Ballroom: Salons 7-8

**Poster Session—Growth Chambers and
Controlled Environments**

(002) Growth and Antioxidants of Cherry Tomato Seedlings Grown under Monochromatic Light-emitting Diodes

*Eun-Young Kim, Bong-Ju Park, Myung-Min Oh

(279) The Effects of Duty Ratio and Intensity of Pulsed LED Light on Growth and Photosynthetic Rate of Lettuce Grown in a Plant Factory System

*Kyung Jin Cho, Ji Yoon Cho, In Sook Park, Jiseon Kim, Tae Jo Lim, Wook Oh

(280) Growth of Lettuce Plants Exposed to Air Anion in a Plant Factory

*Min-Jeong Song, Chung-Su Han, Myung-Min Oh

(281) Cucumber Seedlings Growth and Morphology under Supplemental Pulsed Lighting using Light-emitting Diodes

*Ricardo Hernández, Alexander Dragotakes, Chieri Kubota

(282) Blue Light-emitting Diode Treatments Act to Decrease Kale Leaf Tissue Zeaxanthin Concentrations and Non-photochemical Quenching, Thereby Demonstrating a Less Stressful Light Environment

*T. Casey Barickman, Dean A. Kopsell, Carl E. Sams

(283) Investigating the Incorporation of Microbial Probiotics in Hydroponic Lettuce Production in Ohio

*Natalie Bumgarner, Robert C. Hansen, Robert W. McMahan, Michael S. Showell, Richard Carpenter

(284) Cold Acclimation Attributes among Three Asparagus Cultivars under Controlled Conditions

*JaeJoon Kim, David Wolyn

(285) Shading Rate in Greenhouse Affects Indoor Performance under Different Light Intensity in *Mentha citrata*

*In Sook Park, Tae Jo Lim, Kyung Jin Cho, Jiseon Kim, Ji Yoon Cho, Wook Oh

(286) The Effects of Several Light Sources on Growth and Development in Petunia and Torenia

*In Sook Park, Tae Jo Lim, Kyung Jin Cho, Jiseon Kim, Ji Yoon Cho, Wook Oh

(287) The Effect of Low Light Intensity by Dust of Greenhouses on Tomato Productivity

*Sun Yi Lee, Joon-Kook Kwon, Kyoung-Sub Park, Hyo-Gil Choi

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Local Food Systems

(059) Lead Uptake in Radish Cultivars Grown in Lead Contaminated Urban Soils

A. James Downer, *Tracey Emmerick Takeuchi, Terrance Fugimoto, Bonny Burns Whitmore

(060) It’s a SNAP! Reaching New Farmers’ Market Patrons with Community Collaboration

*Heather Friedrich, Curt R. Rom, Kathleen Ochoa

(061) Permaculture Solutions for an Urban Community Garden

*Abbey E. Piner, Lucy K. Bradley, Will E. Hooker, Julieta T. Sherk

(062) Community Building: Growing a Model Farm to School Program with Community Partnerships

Heather Friedrich, *Curt R. Rom, Samantha E. Jones, Dana Smith, Adam Simmons, Elizabeth Ashbaugh, Christina Thomas

(063) Good Agricultural and Good Handling Practices: Compliance by Everyone?

*Kurt D. Nolte, Channah M. Rock

(064) Economics of Growing Microgreens for the Local Food Market

*Gary R. Bachman, Christine Coker

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

Monday, July 22, 2013

(065) Wyoming Brown and Gold Fresh Cut Sunflowers

*Andrea R. Garfinkel, Karen Panter

(066) Evaluation of the Consumption of Fruits and Vegetables and Socio-economic Status on a Native American Reservation in Kansas

*Pabodha G. Galgamuwe Arachchige,
Candice Shoemaker, Charles Barden, Spencer D. Wood

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Nursery Crops

(039) Evaporative and Transpirational Loss from Three Nursery Container Types

*Alison Stoven O'Connor, Anthony J. Koski,
James E. Klett

(040) Production of *Ligustrum japonicum* in Composted Algae

*Joseph P. Albano, James Altland

(041) Influence of Time on Measuring Container Fertility by the Pour-through Extraction

*Winston C. Dunwell, Dwight Wolfe, Carey Grable

(042) Cyclic Irrigation Does Not Overcome Low Water Holding Capacity of *Juniperus virginiana*-based Substrates for Greenhouse Production of *Rudbeckia*

Travis R. Carmichael, *Cheryl R. Boyer, Stuart L. Warren,
Catherine C. Lavis, Jason J. Griffin

(043) Nutrient Uptake and Removal by Christmas Tree Harvest

*Gladis Zinati, Joseph R. Heckman, Mark Vodak

(044) Comparison of Irrigation Scheduling Based on Daily Water Use or Plant Water Demand of Container-grown Woody Plants

Susmitha Nambuthiri, *Robert L. Geneve, Amy Fulcher

(045) Impact of Container Material on Substrate Heat Buildup in an Outdoor Nursery

Susmitha Nambuthiri, *Robert L. Geneve, Genhua Niu,
Youping Sun, Guihong Bi, Rodney Thomas Fernandez,
Xueni Wang

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Ornamentals/Landscape and Turf

(022) Attractive Plants for Minimally Irrigated Landscapes in Colorado

*Ronda Koski, James E. Klett, Pat Hayward

(023) Turf Fertilization Effects on Seasonal Nitrogen Levels of Autumn Blaze™ Maple and Kentucky Bluegrass in a Mixed Urban Landscape

Alison Stoven O'Connor, *Anthony J. Koski,
Daniel K. Struve, James E. Klett

(024) Green Roofs from Locally-available Materials

*Marietta Loehrlein

(025) Effects of Pre-emergent Weed Control Products on Container-grown Herbaceous Ornamentals

*Ronda Koski, James E. Klett, Cheryl Cooley

(026) Green Roof Substrate Durability: Particle Size Distribution of Five Mature Mid-Atlantic Green Roofs

*Whitney Gaches, John D. Lea-Cox, Steven Cohan,
Andrew Ristvey, Joe Sullivan, Allen Davis

(027) A Trial Study of 11 Kordes Rose Cultivars Grown under Low Maintenance Conditions

*Pamela Collins, Ekaterina Jeliakova, Dennis Rowe

(028) National Ornamental Grass Trials 2013

*Jane Rozum, Mary Hockenberry Meyer, James E. Klett

(029) Comparison of Volatile Flavor Compounds in Korean Native Chrysanthemum Leaves

*Su Jeong Kim, Tae Joung Ha, Jung-Hwan Nam,
Dong Lim Yoo, Jong Taek Suh, Ki Sun Kim

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Produce Quality, Safety, and Health Properties

(067) The Track and Scat Fresh Produce Safety Handbook for Southwest, Arizona

*Kurt D. Nolte, Kaylee Renick, Channah M. Rock

(068) Phytosanitary Irradiation Maintains Grape Quality under Simulated Transportation and Distribution Conditions

*Patty Kraikittikun, Anuradha Prakash

(069) Antioxidant Potentials and Inhibitory Activity of Orange & Purple Color Sweetpotatoes (*Ipomoea batatas* L.) toward Rat Intestinal alpha-Glucosidase using p-Nitrophenyl-alpha-D-glucopyranoside (PNP-G) as a Substrate

*Shahidul Islam, Md. Maksud M. Hossain

(070) Decontamination of Fruit Surfaces by Combining Treatment of Infrared Radiation Heating and Ultraviolet Irradiation

*Daisuke Hamanaka, Naoko Norimura, Noriko Baba,
Morihiro Tsukazaki, Fumihiko Tanaka, Toshitaka Uchino

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Monday, July 22, 2013

(071) Characterization of Anti-proliferative and Antibacterial Properties of Sulforaphene Obtained from Radish Seeds

*Sooyeon Lim, Byung-Ho Hwang, Sang-Wook Han, Jongkee Kim

(072) Watermelon Juice Supports Recovery from Strenuous Exercise

R. Andrew Shanley, *Penelope Perkins-Veazie, David C. Nieman, Amy M. Knab

(073) Comparison of IgE Binding Capacity and Expression Analysis of Strawberry Allergen *Fra a 1*

Daisuke Futsuki, Takeshi Nabe, Yoko Nitta, Hiroki Tsuruta, Kiyoshi Yamazaki, Miho Iduhara, *Yuichi Uno

(074) Varietal Differences in Transcript and Protein Levels of Strawberry Allergen *Fra a 1*

Manabu Narukami, Daisuke Futsuki, Takeshi Nabe, Yoko Nitta, Hiroki Tsuruta, Kiyoshi Yamazaki, Miho Iduhara, Yuji Noguchi, *Yuichi Uno

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Public Horticulture

(206) Public Horticulture—Public Gardens: Is There a Career for You?

*Richard A. Criley

(207) Southern Nevada's Outdoor Education Center

*Angela M. O'Callaghan, M.L. Robinson

(208) Visitation Survey for The Crosby Arboretum in Picayune, Mississippi

*Richelle Stafne

(209) Distribution and Characteristics of Children's Gardens in the United States

*Min Hyeong Kwon, Chun Ho Pak, Chiwon W. Lee

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Small Fruit Breeding

(351) Parthenocarpy in Rabbiteye Blueberry (*Vaccinium ashei*)

*Mark Ehlenfeldt, Stephen Stringer

(352) 'Nocturne' Blueberry: A Winter-hardy Hexaploid Hybrid with Ornamental Fruit and Superior Quality

*Mark Ehlenfeldt, Lisa J. Rowland

(353) Impact of Interspecific Hybridization on Anthocyanin Accumulation in Blueberry Species (*Vaccinium* spp.)

*Gad G. Yousef, Mary A. Lila, Ivette Guzman, James R. Ballington, Allan F. Brown

(354) Estimating the Chilling Requirement of Southern Highbush Blueberry Breeding Selections

*Rachel A. Itle, Tatum Branaman, Silvia R. Marino, James W. Olmstead

(355) Identification of Sparkleberry (*Vaccinium Arboreum*) Genome Introgression with Microsatellite Markers Developed in Highbush Blueberry

*Hilda Patricia Rodriguez-Armenta, James W. Olmstead

(356) A Standardized Phenotyping Protocol for Strawberry in Rosbreed

Megan M. Mathey, Chad E. Finn, Sonali Mookerjee, Kazim Gunduz, James F. Hancock, Amy F. Iezzoni, Lise Mahoney, Thomas M. Davis, *Natalia R. Salinas, Nahla Bassil, Kim E. Hummer, Philip Stewart, Vance M. Whitaker, Daniel Sargent, Beatrice Denoyes, Iraida Amaya, Eric van de Weg

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Vegetable Crops Management

(144) Development of an In Planta Monitoring System of Phosphorus Content in Tomato

*Shu-I Lin, Jia-Ying Lin, Mei-Lin Kuo, Hsiao-Feng Lo

(145) Prediction of Radish Growth as Affected by Nitrogen Fertilization for Spring Production

*Sang Gyu Lee, Kyung-Hwan Yeo, Yoon Ah Jang, Jun Gu Lee, Chun Woo Nam, Hee-Ju Lee, Chang Sun Choi, Young Chul Um, Chiwon W. Lee

(146) The Effects of Air Temperature on Yield and Phytochemical Content of Red Ssamchoo and Red Leaf Lettuce Grown in a Plant Factory

*Sang Gyu Lee, Chang Sun Choi, Jun Gu Lee, Yoon Ah Jang, Chun Woo Nam, Hee-Ju Lee, Kyung-Hwan Yeo, Young Chul Um, Chiwon W. Lee

(147) The Effects of Nitrogen Fertilization on Glucosinolate Concentration and Yield in 28 Cabbage Varieties

*Hunter R. Barrier, Gad G. Yousef, Jose G. Garzon, Allan F. Brown, Christopher C. Gunter

(148) Tissue Elemental Content and Growth Response of Lettuce to Hydroponic Solution Concentration Varied with Cultivar

*Jonathan N. Egilla, Rose Ogutu, Isabelle Nyirakabibi

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Monday, July 22, 2013

(149) Nitrogen Use Efficiency in Processing Sweet Corn

*Charles L. Rohwer, Vincent A. Fritz, Carl J. Rosen

(150) The Influence of Abnormally High Temperatures on the Growth and Yield of Hot Pepper (*Capsicum annum* L.)

*Jeongmin Suh, Hyun-Moo Shin, Jae-Hwan Cho, Chang-Ho Hong, Jumsoon Kang, You Heo

(151) Effect of Grafting on Roma-type Tomato Production in Southwest Florida

Monica Ozores-Hampton, *Xin Zhao

1:00–1:45 PM

Desert Salon 11

eXtension (EEXT) Working Group Business Meeting

Alex Stone, *Chair*; Milton E. McGiffen, Jr., *Chair-elect*; Danielle Treadwell, *Secretary*

Objectives of the EEXT Working Group are to identify those individuals who are involved in eXtension Communities of Practice (CoP) and provide opportunities for collaboration and sharing of ideas and methods among CoP participants through ASHS publications and meetings.

1:00–2:00 PM

Springs Salon C

Propagation (PROP) Working Group Business Meeting

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

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

1:00–2:45 PM

Desert Salon 4-6

Oral Session—Genetics and Germplasm

Moderator: Tomas Ayala-Silva, tomas.ayala-silva@ars.usda.gov

1:00–1:15 PM

Mapping *Alternaria cucumerina* Resistance in *Cucumis melo*

*James Daley, Richard L. Hassell, Patrick Wechter

1:15–1:30 PM

Open Field and High Tunnel Screening for Powdery Mildew Resistance in Strawberry Species and Cultivars in Florida

*Colleen Kennedy, Tomas Hasing, Natalia A. Peres, Vance Whitaker

1:30–1:45 PM

Two New Promising Cultivars of Mango for Florida Conditions

*Tomas Ayala-Silva, Hamide Gubbuk, Michael Winterstein

1:45–2:00 PM

Agronomic Performance of Several Cavendish Cultivars (*Musa* spp. AAA) under Plastic Greenhouse

Dilek Güven, *Hamide Gubbuk, Tomas Ayala-Silva

2:00–2:15 PM

Reconstructing the Domestication Pathway of Macadamia from Australia via Hawaii and California

*Craig M. Hardner, Mark Nickum, Jacqueline Batley, Ainnantul Ahmad Termizi, Cathrine Nock, Ian McConachie, Cameron Peace

2:15–2:30 PM

Geographical Distribution of Genetic and Phenotypic Diversity of *Dirca palustris*

*Bryan J. Peterson, William Graves

2:30–2:45 PM

Genetic Diversity of Ruth's Golden Aster (*Pityopsis ruthii*), An Endangered Species

*Phillip A. Wadl, Denita Hadziabdic, Adam J. Dattilo, Robert N. Trigiano

1:00–4:00 PM

Desert Salon 9-10

Workshop—SCRI Project Directors

Sponsor: USDA–NIFA

Moderator: Thomas A. Bewick, tbewick@csrees.usda.gov

Coordinator: Caroline Sherony, csherony@nifa.usda.gov

This workshop brings together Project Directors from the USDA SCRI (Specialty Crops Research Initiative) research program to discuss their research.

1:45–3:30 PM

Desert Salon 13-14

Oral Session—Viticulture and Small Fruits

Moderator: Mercy A. Olmstead, mercy1@ufl.edu

1:45–2:00 PM

Applications of Acadian LSC™, a Commercial Extract of *Ascophyllum nodosum* Increase Yield and Improve Uniformity in 'Pinot Noir' Wine Grapes

*Holly Little, Annalisa Williams

2:00–2:15 PM

Mechanical Canopy Management Reduces Labor Costs and Maintains Fruit Composition in 'Cabernet

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

Monday, July 22, 2013

Sauvignon' Grape Production

*S. Kaan Kurtural, Geoffrey Dervishian

2:15–2:30 PM

Training Systems for Hybrid Winegrapes in Subtropical Climates

*Mercy A. Olmstead

2:30–2:45 PM

The Effect of Root Restriction on Nitrogen Levels and Gene Expression Regulating Nitrate Reduction and Ammonium Assimilation in Grapevines (*Vitis vinifera* L. × *Vitis labrusca* L.)

Xiuming Yu, Bo Wang, Jiefa Li, Jianjun He, Lei Wang, Caixi Zhang, Wenping Xu, *Shiping Wang

2:45–3:00 PM

Vine-row Groundcover Management Affects Pruning and Cluster Weights, Petiole C and N Content, and N Leachate in a New York Vineyard

*Ian A. Merwin, Rebecca Sirianni, Justine Vanden Heuvel, Michael Brown

3:00–3:15 PM

Pruning Systems and Canopy Management Practice Interact on 'Syrah' Yield and Fruit Composition

*S. Kaan Kurtural

3:15–3:30 PM

Mechanical Canopy and Crop Load Management of Pinot Gris in a Warm Climate

*S. Kaan Kurtural, Joseph Geller

1:45–3:45 PM

Desert Salon 1-2

Workshop—Ten Great Ideas for Your Master Gardener/Consumer Horticulture Program

Sponsor: Consumer Horticulture/Master Gardeners Working Group

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

Coordinator: Ellen Bauske, ebauske@uga.edu

Participants will learn successful ideas from their colleagues that have been utilized in Master Gardener volunteer and consumer horticulture programs. The goal for this fast-paced workshop is for participants to take home at least 10 ideas that they can use in their programs. Presenters will share their innovative programs, social media and project management strategies, and other tips that have led to successful programs and impact in their community. Come prepared to take notes, discuss, and learn how to improve your program. There will also be an opportunity for participants to share and discuss projects and challenges.

1:45–3:45 PM

Springs Salon D/E

Workshop—Contributions of Luther Burbank: Plant Breeding Artist and Legend

Sponsor: History of Horticultural Science Working Group

Coordinators: Jules Janick, janick@purdue.edu; David Karp, dkarp@sprintmail.com

The objectives of this workshop are to: 1) honor Luther Burbank, legendary plant breeder and horticulturist; 2) examine the contributions and present fate of Luther Burbank's creations; and 3) emphasize the role of artistry and horticulture in plant breeding.

1:45–2:05 PM

Luther Burbank: Plant Breeding Artist, Horticulturist, and Legend

*Jules Janick

2:05–2:20 PM

Russet Burbank: No Ordinary Potato

*Charles R. Brown

2:20–2:35 PM

A Vast Array of Beauty: The Accomplishments of the Father of American Ornamental Plant Breeding, Luther Burbank

Neil O. Anderson, Richard T. Olsen

2:35–2:50 PM

Luther Burbank's Plums

*David A. Karp

2:50–3:05 PM

21st Century Approach to Improving Burbank's 'Stoneless' Plum

*Ann Callahan, Chris Dardick, Ralph Scorza

3:05–3:20 PM

Luther Burbank's Contributions to Walnuts

*John Preece, Gale H. McGranahan

3:20–3:35 PM

Luther Burbank's Berries

*Kim E. Hummer, Chad E. Finn, Michael Dossett

3:35–3:45 PM

Discussion

1:45–3:45 PM

Springs Salon A/B

Workshop—How to Get in (and Succeed in) Graduate School

Undergraduate and Graduate Student Sponsored Activity

Coordinator: Kristin Abney, kabney22@gmail.com

The objectives of this workshop are to understand the interview and application process of applying to graduate school as well as how to pick a mentor and foster a good working relationship.

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Monday, July 22, 2013

2:00–3:00 PM

Desert Salon 3

Journal of the ASHS Editorial Board Meeting

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

2:00–3:00 PM

Springs Salon C

Floriculture (FLOR) Working Group Business Meeting

Paul Thomas, *Chair*; Kimberly Moore, *Chair-elect*

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

2:00–3:00 PM

Desert Salon 11

Public Horticulture (PUBHORT) Working Group Business Meeting

Susan Hamilton, *Chair*; Carolyn Robinson, *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.

2:00–6:00 PM

Springs Salon F

Colloquium—Advances and Critical Issues in Breeding Cultivars for Organic Cropping Systems and Developing Methods of Organic Seed Production

Sponsor: Organic Horticulture Working Group

Coordinators: Xin Zhao, zxin@ufl.edu; Erin Silva, emsilva@wisc.edu

The objective of this colloquium is to bring together researchers across the U.S. conducting cultivar development for organic systems, organic cultivar trialing, and organic seed research, allowing for the dissemination of information and the opportunity to forge new research directions and collaborations.

2:00–6:00 PM

Tour Lobby

Palm Spring Aerial Tram Tour

3:00–4:00 PM

Desert Salon 3

HortTechnology Editorial Board Meeting

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

3:00–4:00 PM

Desert Salon 11

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

Gioia D. Massa, *Chair*; Marc van Iersel, *Chair-elect*; Dean Kopsell; *Secretary*

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

3:00–4:00 PM

Springs Salon C

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

Joseph Rothleutner, *Chair*

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.

3:00–4:45 PM

Desert Salon 4-6

Oral Session—Postharvest

Moderator: Bruce D. Whitaker, Bruce.Whitaker@ars.usda.gov

3:00–3:15 PM

Strawberry Flavor: Diverse Chemical Compositions, a Seasonal Influence, and Their Effect on Sensory Perception

*Michael L. Schwieterman, Thomas A. Colquhoun, Elizabeth A. Jaworski, Linda Bartoshuk, Charles A. Sims, Vance Whitaker, David G. Clark

3:15–3:30 PM

Development of Tomato Aroma Profiles during Low Temperature Storage in Air or CA and Recovery during Shelf Life

*Angelos I. Deltsidis, Eleni D. Pliakoni, Elizabeth Baldwin, Jinhe Bai, Anne Plotto, Jeffrey K. Brecht

3:30–3:45 PM

Metabolomics Combined with Standard Quality Measures of ‘Honeycrisp’ Apple Fruit Reveals Aspects of Metabolism Related to Flavor, Crispness, Maturity, and Storability

*Rachel Leisso, David Buchanan, Janie Countryman, Chris Sater, Christopher B. Watkins, James Mattheis, David R. Rudell

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Monday, July 22, 2013

3:45–4:00 PM

Transcriptome Analysis of European Pears (*Pyrus communis* cv. Bartlett) Reveals Significant Gene Families and Co-expressed Genes Associated with Development of Ripening Capacity by Temperature Conditioning

*Ngoc Nham, Cai-Zhong Jiang, Trisha Kietikul, Andrew J. Macnish, Elizabeth J. Mitcham

4:00–4:15 PM

Lipoxygenase and Apple Aroma: Gene Expression of Lipoxygenase Family Members in Apple Peel

*Carolina Contreras, Randolph Beaudry

4:15–4:30 PM

Effect of Postharvest Treatments on Volatiles in ‘Rio Red’ Grapefruit Juice

*Priyanka R. Chaudhary, G.K. Jayaprakasha, Bhimanagouda S. Patil

4:30–4:45 PM

Phospholipase *D*_α Activity in Mesocarp Tissues from Fruit of *Cucumis melo* L. Reticulatus and Inodorus Cultivars

*Bruce D. Whitaker, Gene E. Lester, John L. Jifon, Miguel A. Gomez-Lim

4:00–5:00 PM

Desert Salon 3

Fellows Screening Committee Meeting

Robert E. Lyons, *Chair*; Michael Wisniewski; Chad E. Finn; Emily Hoover; Caula Beyl; Penelope Perkins-Weazie; Tim Davis; Bruce Schaffer; Scott NeSmith; Paul Bosland

4:00–5:00 PM

Springs Salon C

Fruit Breeding (FRBR) Working Group Business Meeting

Vance M. Whitaker, *Chair*; Danny Barney, *Chair-elect*; James W. Olmstead, *Secretary*

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

4:00–5:00 PM

Desert Salon 12

History of Horticultural Science (HIST) Working Group Business Meeting

Jules Janick, *Chair*; David Karp, *Secretary*

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

4:00–5:00 PM

Desert Salon 11

Plant Biotechnology (BTCH) Working Group Business Meeting

Kevin Folta, *Chair*

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, plant growth, and development on problems of concern in improvement and propagation of horticultural crops.

4:00–6:00 PM

Directors Suite VI

SRASHS Executive Committee Meeting

Coordinator: David W. Reed

4:00–6:00 PM

Desert Ballroom: Salons 7-8

Undergraduate Poster Competition

Please plan to be present for the entire poster competition session.

(193) The Inheritance of Plant and Flower Traits in Rose

*Sarah E. Jones, David H. Byrne

(194) Phylloquinone (Vitamin K) Variation, QTL Identification, and the Correlation with Carotenoids in Broccoli (*Brassica oleracea* var. *italica*)

*Kamilla Korsvold, Ivette Guzman, Robert Byrd, Gad G. Yousef, Allan F. Brown

(195) Microshoot Proliferation of *Geranium magniflorum* ‘La Veta Lace’

*Abigail R. Debner, John Murgel, Todd P. West

(196) Stem-Water Potential Reading Variability in Olive (*Olea europaea*)

*Luke K. Milliron, William H. Krueger, Richard C. Rosecrance

(197) Persistence of Urea in a Coastal Plain Soil: An Incubation Study

*I. Bottone, L.C. Kibet, Arthur Allen, Lurline E. Marsh, Fawzy M. Hashem, Eric May, Ray Bryant

(198) Free Radical Scavenging Activities of Marrs Sweet Oranges

*Shreyas Kommein, Bhimanagouda S. Patil

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Monday, July 22, 2013

(199) Changes of Anthocyanin and Carotenoid Concentration in Purple Color Paprika Fruit during Ripening

*Kumi Yamanaka, Masayoshi Nakayama, Manami Akai, Takashi Ikeda

(200) Waste Wool, Cocoa Hulls, and Clover as Organic Mulch Alternatives in Tomato Production

*Whitney Garton, Sven Verlinden, Renee Conneway

(201) Secondary Shoot Proliferation in Hosta 'Honeybells' and the Isolation Plantlets Free of Hosta Virus X

*Joel Z. Sehloff, Ben E. Lockhart, Ryan Grajkowski, David C. Zlesak

(202) Commercial Food Grade Cinnamon Products Inhibit Mycelia Growth of Four Fungi In Vitro

*Shane Walsh, Charles E. Johnson

4:00–6:00 PM

Desert Salon 1-2

Workshop—How Public Policy Engagement Helps Horticultural Scientists

Sponsor: National Issues Task Force

Coordinator: Thomas Björkman, tnb1@cornell.edu

This workshop will have an update on ASHS' participation in the action regarding the new Farm Bill, budget stalemates, and the next steps.

4:00–4:15 PM

How Public Policy Will Help Horticultural Scientists

4:15–4:30 PM

ASHS' Impact on Washington Decision Makers

*Jonathan Moore, Thomas Björkman

4:30–4:45 PM

Engaging Congressional Staff

*Rebekah Rodriguez-Lynn, Thomas Björkman

4:00–6:00 PM

Desert Salon 13-14

Workshop—Sustainable Production of Essential Oils

Sponsor: Herbs Spices and Medicinal Plants Working Group

Moderator: Valtcho D. Jeliakov, valtcho.pubs@gmail.com

Coordinator: Lyle E. Craker, craker@pssci.umass.edu

The United States is a major producer of peppermint and spearmint essential oils. U.S. peppermint oil is considered to

be a quality standard for peppermint oils in the international market. Recent research has shown feasibility for other species to be developed as essential oil crops for the United States. The objective of this workshop is to bring together researchers and industry representatives to share knowledge and outline future directions for research and development.

4:00–6:00 PM

Springs Salon D/E

Workshop—What Happens When Your Growth Chamber Lighting or Controls Become Obsolete? Retrofitting Growth Chambers to Improve Performance

Sponsor: Growth Chambers and Controlled Environments Working Group

Moderator: Marc van Iersel, mvanier@uga.edu

Coordinator: Gioia D. Massa, gioia.massa@nasa.gov

This workshop provides an overview of the procedures to upgrade older growth chambers and inform the horticulture community on options that are available.

4:00–4:15 PM

Lighting Options for Growth Chambers

*Jacob A. Nelson

4:15–4:30 PM

General Growth Chamber Lighting Obsolescence

*Reg Quiring

4:30–4:45 PM

Upgrading a Plant Growth Chamber Controller

*Marc Theroux

4:45–5:00 PM

Retrofitting Growth Chambers for Improved Intensity, Efficiency, Uniformity, and Spectral Characteristics

*Richard Tuck

4:00–6:00 PM

Springs Salon A/B

Workshop—eXtension/Ecampus/ On Campus: Synergies in Curriculum Development

Sponsor: eXtension Working Group

Coordinator: Alexandra Stone, stonea@hort.oregonstate.edu

This workshop will explore how eXtension Communities of Practice are developing curricula and educational resources to train current and future agricultural professionals through eXtension's Moodle campus, on campus, Ecampus, and other educational venues.

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

Monday, July 22, 2013

4:00–4:15 PM

Eviticulture as a Tool for Educating Future Grape Industry Professionals through Traditional and Nontraditional Teaching

*Patricia A. Skinkis, Eric Stafne, Chris Lake

4:15–4:30 PM

Developing Topic Groups into Curriculum for Crop Improvement: Evolution of the Plant Breeding and Genomics Community of Practice

*David Francis, Shawn Yarnes, John McQueen, Barbara E. Liedl, Michael Coe

4:30–4:45 PM

Development of Technical Training and Support for Agricultural Service Providers and Farmers in Certified Organic Dairy Production Systems through eOrganic

*Cindy Daley, Heather Darby, Sarah Flack, Audrey Denney, Debra Heleba

4:45–5:00 PM

Problem- and Planning-based Learning in Organic and Ecological Agroecosystems: An Eorganic and OSU Ecampus Partnership

*Alexandra Stone, Anita Azarenko, Helen Atthowe

4:15–6:00 PM

Desert Salon 9-10

Oral Session—Organic Horticulture

Moderator: Carl Motsenbocker, cmotsenbocker@agcenter.lsu.edu

4:15–4:30 PM

Summer Cover-cropping Treatments for Enhanced Winter Vegetable Crop Nutrition, Growth, and Yield

*Oli G Bachie, Milton E. McGiffen, Jr.

4:30–4:45 PM

Compost, Cover Crops, and Mulch Effects in Organic Vegetable Systems

*Kathleen Delate, Cynthia Cambardella

4:45–5:00 PM

Soil Nitrogen Dynamics and Organic Bell Pepper Yield Are Affected by Rye–Vetch Cover Crop Residue Quality and Plastic Mulch

*Zachary D. Hayden, Mathieu Ngouajio, Daniel C. Brainard

5:00–5:15 PM

Assessment of Degradable Alternatives for Plastic

Mulch for Organic Tomato (*Solanum lycopersicum*) Production in the Southeast

Jeffrey T. Martin, *Annette L. Wszelaki

5:15–5:30 PM

Organic Habanero Pepper (*Capsicum chinense*): Effect of Intercropping Marigold (*Tagetes erecta*) and Mulching with Sawdust on Controlling the White Fly (*Bemisia tabaci*) and Root-knot Nematodes (*Meloidogyne* spp.)

*Roland Ebel

5:30–5:45 PM

Fall Broccoli Production following Summer Cover Crops in Louisiana

*Carl E. Motsenbocker, Robert Williams, William B. Evans, Rao S. Mentreddy, Girish Kumar Panicker

5:45–6:00 PM

The Effect of *Beauveria bassiana* on Parasite Fauna of Organic Habanero Pepper in Quintana Roo, Mexico

María de Jesús Méndez-Aguilar, *Roland Ebel

5:00–6:00 PM

Desert Salon 3

Education Division Advisory Council Meeting

Anita Azarenko (Education Division Vice President), *Chair*; David W. Reed (Past Education Division Vice President); all Working Group Chairs and Chairs-elect, Education Division

5:00–6:00 PM

Desert Salon 12

Scholarship Awards Committee Meeting

Lurline E. Marsh *Chair*; Richelle Stafne; Cathie Lavis; Ajay Nair; Allan Brown; Michelle Leinfelder-Miles; David Hensley

5:00–6:00 PM

Springs Salon C

Viticulture and Small Fruits (VSF) Working Group Business Meeting

James W. Olmstead, *Chair*; Nahla Bassil, *Chair-elect*; Rebecca Harbut, *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.

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

Tuesday, July 23, 2013

5:00–6:30 PM

Desert Salon 4-6

Oral Session—Vegetable Breeding

Moderator: Charles L. Rohwer

5:00–5:15 PM

Initiating a Hop Breeding Program at the University of Minnesota

*Charles L. Rohwer, John R. Thull, Vincent A. Fritz

5:15–5:30 PM

Regional Hybrid Broccoli Trials Provide a Means to Further Breeding Efforts of This Increasingly Important Vegetable Crop

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

5:30–5:45 PM

Estimating Heritability of Skinning Resistance in Sweetpotato

*Reeve Legendre, Don LaBonte, Ramon A. Arancibia

5:45–6:00 PM

Host Plant Resistance to *Cucurbit Yellow Stunting Disorder Virus* and *Bemisia Tabaci* in Melon: Status and Prospects

*James D. McCreight, William M. Wintermantel, Eric T. Natwick

6:00–6:15 PM

Cucurbit Powdery Mildew Race Variation on Melon in California's Sacramento Valley

*James D. McCreight

6:15–6:30 PM

Screening for Bacterial Fruit Blotch Resistance in the USDA Watermelon Germplasm Collection

*Shen Ma, Todd C. Wehner

6:00–6:30 PM

Desert Salon 3

Research Division Advisory Council Meeting

John D. Lea-Cox (Research Division Vice President), *Chair*; Rebecca L. Darnell (Past Research Division Vice President); all Working Group Chairs and Chairs-elect, Research Division

6:30–7:30 PM

Springs Patio

Welcome Reception

Tuesday, July 23, 2013

7:00–8:00 AM

Tour Lobby

Golf Course and Irrigation Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

7:00–9:00 AM

Springs Salon F

Horticultural Commodity Judging Contest and Plant Identification Contest Set-up

7:30 AM–5:00 PM

Center & North Registration Counters

Registration Open

8:00–9:00 AM

Desert Salon 11

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

R. Paul Schreiner, *Chair*; Xin Zhao, *Chair-elect*

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.

8:00–9:00 AM

Springs Salon C

Seed and Stand Establishment (SSEST) Working Group Business Meeting

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

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.

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

Tuesday, July 23, 2013

8:00–9:15 AM

Springs Salon A/B

Oral Session—Growth Chambers and Controlled Environments

Moderator: Jiwan P. Palta, jppalta@wisc.edu

8:00–8:15 AM

Shoot Tissue Pigment Concentrations in Broccoli Microgreens Are Higher under Narrow-Band Wavelengths from LEDs than under Fluorescent/Incandescent Light

*Dean A. Kopsell, Carl E. Sams, Robert C. Morrow

8:15–8:30 AM

Glucosinolate Concentrations of Broccoli Microgreens Are Greater under Specific Narrow Wavelength LED Light Regimes than under Conventional Fluorescent/Incandescent Light in Controlled Environments

*Carl E. Sams, Dean A Kopsell, Robert C. Morrow

8:30–8:45 AM

Comparison of LED Supplemental Lighting and High Pressure Sodium Energy Consumption and Plant Responses of Cucumber and Tomato Transplants

*Ricardo Hernández, Chieri Kubota

8:45–9:00 AM

Comparison of Light-emitting Diode Towers Versus High-pressure Sodium Lamps for Year-round Production of High-wire Greenhouse-grown Tomatoes

*Celina Gomez, Cary A. Mitchell

9:00–9:15 AM

Oedema/Intumescence Injury on the Leaves of Potato Plants Is Mitigated by Calcium Nutrition

*Jiwan P. Palta, Justin E. Schabow

8:00–9:30 AM

Desert Salon 1-2

Oral Session—Citrus and Other Fruit and Nut Crops

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

8:00–8:15 AM

Influence of Ethylene Treatment on Bioactive Compounds of 'Rio Red' Grapefruit

Priyanka R. Chaudhary, G.K. Jayaprakasha,
*Bhimanagouda S. Patil

8:15–8:30 AM

Potential Non-GMO Genetic Solutions to HLB for Sustainable and Profitable Citriculture in Florida

*Jude W. Grosser, Fred Gmitter, Jr., William S. Castle

8:30–8:45 AM

Jujube (*Ziziphus jujuba* Mill.) Cultivars in the United States

*Shengrui Yao, Steve Guldan

8:45–9:00 AM

Pollen Viability and Pollination in Sugar Apple (*Annona squamosa*) and 'Gefner' Atemoya (*A. cherimola* × *A. squamosa*) in South Florida

*Marlon C.T. Pereira, Jonathan H. Crane, Silvia Nietsche, Wanda Montas, Wagner Vendrame

9:00–9:15 AM

The 'Gasaway' Source of Resistance to Eastern Filbert Blight: What We Have Learned Over 10 Years in New Jersey

*Thomas J. Molnar, Megan Muehlbauer, John M. Capik

9:15–9:30 AM

Evaluation of Soil Steam Disinfestation on Early Growth of Almond (*Prunus dulcis*) Orchards with High Likelihood of Replant Disease and Confirmed Presence of Parasitic Nematodes

*Andrew J. Johnson, Greg Browne, David Doll, Steven A. Fennimore, Bradley D. Hanson

8:00–9:45 AM

Springs Salon D/E

Oral Session—Ornamental Plant Breeding

Moderator: Michele Scheiber, mscheiber@novaflora.com

8:00–8:15 AM

Historical Significance of Rhododendron Development in Louisiana

*Allen D. Owings, Edward W. Bush

8:15–8:30 AM

The Ornamental Plant Trialing Program at Star Roses and Plants

*Michele Scheiber, Michael Dobres

8:30–8:45 AM

Breeding Lance-leaved Caladiums

*Zhanao Deng

8:45–9:00 AM

Improved Floral Characteristics of Tetraploid Stephanotis

*Kenneth Leonhardt, Susana D. Vanzie-Canton

9:00–9:15 AM

Autotetraploid Induced Sterility in the Pink and White Shower Tree

*Ken W. Leonhardt

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

Tuesday, July 23, 2013

9:15–9:30 AM

The Female Fertility of Triploids in *Lilium Euploid* and 5-Same-Genomes of Endosperm are of Ensenca

*Shujun Zhou

9:30–9:45 AM

Genetic and Phenotypic Characterization of Oriental Lilies Transformed with Genes of Herbicide Tolerance and Flavonoid Biosynthesis

Soo Jung Hyun, Sun Kim, Young Sook Ryu,
*Byung Joon Ahn

8:00–9:45 AM

Desert Salon 9-10

Oral Session—Postharvest

Moderator: Yan Wang, yan.wang@oregonstate.edu

8:00–8:15 AM

Development of Novel, Antimicrobial Plant Essential Oil Treatments to Reduce the Postharvest Incidence of *Botrytis cinerea* on Strawberries

*Ryan Brantley, J. Wyatt Brown

8:15–8:30 AM

The Importance of Leaf Maturity to Shelf-life and Quality of Fresh-cut Kale Stored at Two Temperatures

*Karin Albornoz, Marita I. Cantwell

8:30–8:45 AM

Real World Evaluation of Packaging Strategies and SO₂ Fumigation for Shipment of Blueberry Fruit from Chile to North America

*Randolph Beaudry, Claudia Moggia, Gustavo Lobos,
Jorge Retamales, Carolina Bravo

8:45–9:00 AM

The Effects of Low Oxygen on Chlorophyll and Glycoalkaloid Concentrations in Potato Tubers

*Hsueh-yuan Chang, Marita I. Cantwell

9:00–9:15 AM

Firmness and Quality Changes in Broccoli Due to Dehydration and Hydration

*Anderson Martins Melo, Marita I. Cantwell

9:15–9:30 AM

Evaluation of the Impact of Hot Water Treatment on the Antioxidant System of Fresh Tomatoes in Chilling and Non-chilling Storage

*Francisco Loayza, Amarat Simonne, Elizabeth Baldwin,
Jeffrey K. Brecht

9:30–9:45 AM

Extending Storage Life and Ensuring Arrival Quality of ‘Bartlett’ Pears after Long-distance Export by Maintaining Cold Chain and MA Chain

*Yan Wang, David Sugar

8:00–10:00 AM

Springs Ballroom Salons J-L

Extension & Industry Division Breakfast

Presiding: Jeffrey Norrie, jnorrie@acadian.ca;

Gary Bachman, gbachman@ext.msstate.edu

(*Preregistration and prepayment required.*)

8:00–10:00 AM

Desert Salon 3

International Division Advisory Council Meeting

Esmail “Essie” Fallahi (International Division Vice President), *Chair*; Diane Doud Miller, (Past International Division Vice President); all Working Group Chairs and Chairs-elect, International Division

8:00–10:00 AM

Desert Salon 13-14

Oral Session—SCRI-MINDS Water Utilization and Management

Moderator: Olyssa Starry, olyssa@gmail.com

8:00–8:15 AM

Hydraulic Properties of Peat-based Substrates: The Importance of Hydraulic Conductance

*Marc van Iersel, Sue Dove, James S. Owen, Jr.

8:15–8:30 AM

Control of Poinsettia Stem Elongation: Height Limits using Deficit Irrigation

*Peter Alem, Paul Thomas, Marc van Iersel

8:30–8:45 AM

Subirrigation Controlled by Capacitance Sensors for Citrus Rootstock Production

*Rhuano Soranz Ferrarezi, Maycon Diego Ribeiro,
Marc van Iersel, Roberto Testezlaf

8:45–9:00 AM

Estimation of Green Roof Stormwater Efficiency using Sensor-informed Models

*Olyssa Starry, Andrew Ristvey, Steven Cohan,
John D. Lea-Cox

9:00–9:15 AM

Effects of Water Availability and Temperature on CAM Expression and Water Use Efficiency by *Sedum album* and *Sedum kamtschaticum*

*Olyssa Starry, Jongyun Kim, Sue Dove, Marc van Iersel,
John D. Lea-Cox

9:15–9:30 AM

Carbon and Water Flux Responses to Physiology by

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

Tuesday, July 23, 2013

Environment Interactions: A Sensitivity Analysis of Climate Impacts on Biophysical Model Parameters

*William L. Bauerle, Alex B. Daniels, Dave M. Barnard

9:30–9:45 AM

Implementing Substrate Moisture Set-point Irrigation Control in Cut-flower Greenhouse Production

Jongyun Kim, Bruk E. Belayneh, *John D. Lea-Cox

9:45–10:00 AM

The Costs and Benefits of Sensor Networks for a Cut-flower Greenhouse Operation

*John Majsztrik, Erik Lichtenberg, Monica Saavedra

8:00 AM–12:00 PM

Desert Salon 4-6

Colloquium—Integrated Pest Management for Vegetable Crops in the Tropics

Sponsor: Tropical Horticulture Crops Working Group

Moderator: Rangaswamy Muniappan, rmoni@vt.edu

Coordinators: Ricky Bates, rmb30@psu.edu;

Rangaswamy Muniappan, rmoni@vt.edu

This meeting will provide an opportunity to learn how an international, multidisciplinary group of specialists helps farmers grow healthier vegetable crops via IPM components and packages in different tropical regions of the world. We've developed a program featuring a group of speakers who will present their work on IPM package development and implementation.

8:00 AM–12:00 PM

Tour Lobby

Whitewater Preserve & Wind Farms Tour

8:15–8:45 AM

Starbucks at J.W Marriott Resort

Graduate Student Working Group Morning Gathering

Coordinator: Kristin Abney, kabney22@gmail.com

Why wait until the student events to meet the other graduate and undergraduate students at ASHS this year? Come by and meet them while you grab your morning cup of coffee (or tea).

8:30 AM–2:30 PM

Desert Ballroom: Salons 7-8

Exhibits Open

8:30 AM–5:00 PM

Desert Ballroom: Salons 7-8

Poster Hall Open

9:00–10:00 AM

Desert Salon 12

Bioenergy (BioE) Working Group Business Meeting

Wagner Vendrame *Chair*; Thomas 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.

9:00–10:00 AM

Desert Salon 11

Nursery Crops (NUR) Working Group Business Meeting

Cheryl R. Boyer, *Chair*; John Majsztrik, *Chair-elect*;
Brian Jackson, *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, teachers, and researchers by developing information programs and interacting with the nursery industry and profession.

9:00–10:00 AM

Springs Salon C

Vegetable Breeding (VGBR) Working Group Business Meeting

Mark Farnham, *Chair*; Michael Mazourek, *Chair-elect*;
Kevin M. Crosby, *Secretary*

The VGBR Working Group promotes the exchange of information on breeding procedures, screening techniques, and other 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.

9:00 AM–12:00 PM

Springs Salon F

The Horticultural Commodity Judging Contest and Plant Identification Contest

The Horticultural Commodity Judging Contest and Plant Identification Contest 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.

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

Tuesday, July 23, 2013

9:00 AM–12:00 PM

Directors Suite VI

Roberto G. Lopez, *Wesley Randall

**The Horticultural Commodity
Judging Plant Identification Written
Examination**

11:30–11:45 AM

Deep Simple Morphophysiological Dormancy in
Seeds of *Adonis amurensis* Regel & Radde Native to
Korea

*Seung Youn Lee, Yong Ha Rhie, Shin Young Kim,
Ki Sun Kim

9:45–10:15 AM

Desert Ballroom: Salons 7-8

Break

10:00–11:00 AM

Springs Salon C

9:45–11:45 AM

Springs Salon A/B

Consulting Editors Meeting

Oral Session—Floriculture

Presiding: M. LeRon Robbins and Neal E. De Vos

Moderator: James E. Barrett, jbarrett@ufl.edu

Meeting of the Consulting Editors for *HortScience*, *HortTechnology*, and the *Journal of ASHS*.

9:45–10:00 AM

Effects of Nitrogen Rates on Plant Performance and
Nutrient Content in Reblooming Iris

*Xiaojie Zhao, Guihong Bi, Richard L. Harkess

10:00–11:00 AM

Desert Salon 11

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

10:00–10:15 AM

Changes in Nitrogen Partitioning to Inflorescence
and Pseudobulbs during Various Growth Stages of
Oncidium ‘Gower Ramsey’

*Yao-Chien Alex Chang, Yi-Ai Kuo

Cameron Peace, *Chair*; C. Thomas Chao, *Chair-elect*;
Stan Hokanson, *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.

10:15–10:30 AM

Factors Affecting the Efficacy of Dikegulac Sodium
on Poinsettias

*James E. Barrett, Carolyn A. Bartuska,
Robert F. Weidman

10:00–11:15 AM

Springs Salon D/E

Oral Session—Bioenergy

Moderator: John L. Jifon, jljifon@ag.tamu.edu

10:30–10:45 AM

Paclobutrazol and Ancymidol Lower Water Use of
Potted Ornamental Plants and Plugs

*Iftikhar Ahmad, Brian E. Whipker, John M. Dole,
Ingram McCall

10:00–10:15 AM

High-throughput Quality Characterization of Warm
Season Lignocellulosic Feedstocks

*John L. Jifon, Jorge da Silva, Gerleene Acuna,
Nael El-Hout

10:45–11:00 AM

Reducing Evapotranspiration of Pansies: Efficacy
and Duration of ABA and ABA-analog Spray
Applications

*Geoffrey Weaver, Marc van Iersel

10:15–10:30 AM

Phenotypic Diversity of *Jatropha curcas* L. Accessions
under Warm Subtropical Conditions

*Silvia Nietsche, Wagner Vendrame, Jonathan H. Crane,
Marlon C.T. Pereira, Sidnei Reis

11:00–11:15 AM

Optimal Postharvest Handling Protocols for
Antirrhinum majus ‘Chantilly Yellow’ and *Celosia*
Cristata ‘Fire Chief’

*Iftikhar Ahmad, John M. Dole, Frank A. Blazich

10:30–10:45 AM

Differential Gene Expression in *Jatropha curcas* in
Vitro Cultures Exposed to Microgravity

*Wagner Vendrame, Ania Pinares

11:15–11:30 AM

Determining the Effectiveness of Red and Blue Light-
Emitting Diodes as Supplemental Lighting during
Seedling (plug) Propagation

10:45–11:00 AM

Elevated Salinity in Irrigation Water Reduced Growth
of *Ricinus communis* L. Cultivars

*Youping Sun, Genhua Niu, Pedro Osuna

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

11:00–11:15 AM

Effects of Implementing Psi-light on Hydrogen Production via Biophotolysis in *Chlamydomonas reinhardtii* Mutant Strains

*Daniel Johnson, Joel L. Cuello, Takanori Hoshino

10:15–12:00 PM

Desert Salon 1-2

Oral Session—Viticulture and Small Fruits

Moderator: Michele R. Warmund, warmundm@missouri.edu

10:15–10:30 AM

Spatial Distribution of Plant-parasitic Nematodes in Semi-arid Vineyards of the Pacific Northwest

*Amanda Howland, Patricia A. Skinkis, R. Paul Schreiner, Inga Zasada

10:30–10:45 AM

Method for Producing Long-cane Blackberry Plants

*Fumiomi Takeda

10:45–11:00 AM

Characterization and Population Genetics of a New Virus Infecting Blackberry

Thanuja Thekke-Veetil, Nina Abou-Ghanem Sabanadzovic, Robert Martin, Sead Sabanadzovic, *Ioannis Tzanetakakis

11:00–11:15 AM

Characterization of Eriophyid Mites Inhabiting American Elderberry

*Michele R. Warmund, Audrey L. Davis

11:15–11:30 AM

Root Restriction Improved Anthocyanins Accumulation and Biosynthetic Genes Expression during Berry Development in ‘Kyoho’ Grape

Bo Wang, Caixi Zhang, Jianjun He, Xiuming Yu, Jiefa Li, Wenping Xu, Xianjin Bai, Xianjin Bai, Xianjin Bai, *Shiping Wang

11:30–11:45 AM

Plant Architecture of *Vaccinium* Genotypes as Influenced by Soil Characteristics

*Gerardo H. Nunez, James W. Olmstead, Rebecca L. Darnell

11:45–12:00 PM

Comparison of Bud Development Across Traditional and New Cranberry Cultivars

Lisa Wasko DeVetter, *Rebecca Harbut, Jed Colquhoun

10:15 AM–12:15 PM

Desert Salon 13-14

Workshop—Consumer Research on Sustainability

Sponsor: Marketing and Economics Working Group

Coordinator: Bridget K. Behe, behe@msu.edu

The workshop will convey timely research information on consumer studies involving sustainability related to horticultural products, services, and experiences

10:15–10:30 AM

Consumer Perceptions of Sustainability

*Bridget K. Behe, Ben Campbell, Charles R. Hall, Hayk Khachatryan, Jennifer Dennis

10:30–10:45 AM

Plant Container Preferences for North American Consumers

Ben Campbell, Bridget K. Behe, *Jennifer Dennis, Charles R. Hall, Hayk Khachatryan

10:45–11:00 AM

Consumer Perspectives on Local, Organic, and Sustainable Terms

*Ben Campbell, Bridget K. Behe, Charles R. Hall, Hayk Khachatryan, Jennifer Dennis

11:00–11:15 AM

Environmental Incentives and Willingness to Pay Price Premiums for Environmentally-friendly Plant Attributes

*Hayk Khachatryan, Ben Campbell, Bridget K. Behe, Charles R. Hall, Jennifer Dennis

11:15–11:30 AM

The Use of Smartphone Technologies to Access Gardening Information

*Charles R. Hall, Bridget K. Behe, Ben Campbell, Jennifer Dennis, Hayk Khachatryan

10:15 AM–12:15 PM

Desert Salon 9-10

Workshop—Perspectives on Building Strong University–Industry Research Relationships

Sponsor: Industry Division

Moderator: Jeffrey Norrie, jnorrie@acadian.ca

Coordinator: Jeffrey Norrie, jnorrie@acadian.ca

This workshop will provide an understanding of how several prominent researchers and industry representatives interact to establish, conduct, and report on collaborative research. The speakers may touch on issues ranging from identification of qualified research partners to funding, execution, and technology transfer.

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

B.Y. Morrison Memorial Lecture Series

Opportunities in Plant Breeding: From the Integration of Genomics to the Participation of Farmers

Tuesday, July 24 • 12:00–1:00 PM • Springs Salon A/B

The Agricultural Research Service (ARS), USDA's principal in-house scientific agency, and ASHS are pleased to welcome **Paul Gepts**, Professor of Plant Sciences, University of California, Davis, as the 2013 B.Y. Morrison Memorial Lecturer. The title of his lecture is "Opportunities in Plant Breeding: From the Integration of Genomics to the Participation of Farmers."

"It has been said that we live in a great time to be biologists," says Gepts. "The same can be said of plant breeding. In addition to the renewed interest in plant breeding as a profession, a number of scientific developments, such as genomics and participatory breeding, promise to increase the impact of plant breeding, especially in light of rapidly gathering challenges such as climate instability and population increase."

About Paul Gepts

Paul Gepts is a renowned agronomist who specializes in how domestication has influenced the biodiversity of crops. As head of the Gepts Laboratory at the University of California, Davis (UC Davis), his expertise on the elucidation of geographic and ecological patterns of genetic diversity and domestication of plants has given us a better understanding of how cultivation has changed our crops. Since January 2012, Gepts has led the UC Davis bean breeding program, with the responsibility for producing new varieties of lima bean, garbanzos, and common bean as well as developing new genetic and genomic tools for *Phaseolus*, such as a broad range of genetic markers, coordinated molecular linkage maps, BAC libraries, QTL analyses, and, recently, the PhaseolusGenes database. As a consequence of his research, the common bean (*P. vulgaris*) is now one of the crops with the best understood patterns of domestication and genetic diversity at the eco-geographic level.

The scope of his bean work is international. Gepts has conducted explorations in Latin America for wild relatives of *Phaseolus*. He also provides scientific coordination for the African Bean Consortium, a project funded by the Kirkhouse Trust that seeks to develop new bean varieties in East Africa using a combination of phenotypic and marker-assisted selection.

Data from his research group has been used extensively in public and private breeding programs in the U.S. and abroad, including the documentation of a marked genetic bottleneck resulting in an increased focus on landraces and wild beans, the utilization of inter-racial, inter-gene pool, and inter-specific crosses to broaden diversity of the elite gene pool. In particular, the information from his research has led to the application of the bean host-pathogen coevolution to identify new disease resistances. Gepts is also lead editor of *Biodiversity in Agriculture: Domestication, Evolution, and Sustainability*, a notable book on the origins of farming and farm animals in 2012.

Among his many honors and awards are election as Fellow of the American Association for the Advancement of Science, the American Society of Agronomy, and the Crop Science Society of America. He has also received both the Distinguished Achievement and the Meritorious Service Award from the Bean Improvement Cooperative. He was a co-author of the Best Paper (2010) for the Crop Science Society of America and served as associate editor of the American Journal of Botany from 2005 to 2012.

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.

Tuesday, July 23, 2013

11:00 AM–12:00 PM

Desert Salon 3

HortScience Editorial Board Meeting

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

11:00 AM–12:00 PM

Desert Salon 11

Plasticulture (PLAST) Working Group Business Meeting

Peter Nitzsche, *Chair*; Juan Carlos Díaz-Pérez, *Chair-elect*

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.

11:30 AM–1:00 PM

Springs Salon D/E

Oral Session—Fruit Breeding

Moderator: Ralph Scorza, Ralph.Scorza@ars.usda.gov

11:30–11:45 AM

Fruit Tree Domestication: The Evolution of Productivity

*Eliezer E. Goldschmidt

11:45–12:00 PM

Prediction of Genetic Potential of Candidate Apple Cultivars for Fruit Quality from Unreplicated Multi-location Field Trials

*Craig M. Hardner, Cameron Peace, James Luby, Katherine Evans

12:00–12:15 PM

Enabling Marker-assisted Breeding in Heterozygous Polyploid Species: The Strategy Used in Sour Cherry (*Prunus cerasus*)

*Travis Stegmeir, Umesh Rosyara, Audrey Sebolt, Amy F. Iezzoni

12:15–12:30 PM

“FasTrack” Breeding to Produce New Plum Pox Virus Resistant Plum Germplasm and Cultivars

*Ralph Scorza, Chris Dardick, Ann Callahan, Chinnathambi Srinivasan, Doug Raines, Ted M. DeJong, Sarah Castro

12:30–12:45 PM

Genome-wide QTL Detection of Individual Sugars, Sensory Sweetness, and Soluble Solids Content in Apples

*Yingzhu Guan, Sujeet Verma, Cameron Peace, David R. Rudell, Katherine Evans

12:45–1:00 PM

Genome-wide QTL Analyses Uncover SNP Marker-based Functional Alleles for Apple “Fresh Sensation” Traits

*Sujeet Verma, Cari Schmitz, Matthew Clark, Yingzhu Guan, Benjamin Orcheski, Julia Harshman, Katherine Evans, Susan K. Brown, James R. McFerson, Nahla Bassil, Umesh Rosyara, Marco Bink, James Luby, Eric van de Weg, Amy F. Iezzoni, Cameron Peace

12:00–1:00 PM

Springs Salon A/B

2013 B.Y. Morrison Lecture

Lecturer: Paul Gepts

Professor of Plant Sciences, University of California, Davis

Topic: **Opportunities in Plant Breeding: From the Integration of Genomics to the Participation of Farmers**

(see inset on facing page)

12:00–1:00 PM

Desert Salon 12

Horticultural Landmarks Selection Committee Meeting

John Masiunas, *Chair*; Patricia Holloway; Martin Stone; Jeff Olsen; Richelle Stafne; Mary Lewnes Albrecht

12:00–1:00 PM

Desert Salon 3

William A. (“Tex”) Frazier Lecture Selection Committee

Penelope Perkins-Veazie, *Chair*; Ellen T. Pappozzi; Stephanie Harvey; Craig Campbell; John M. Dole

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Consumer/Commercial Horticulture and Master Gardeners

(210) Citizen Scientist Master Gardeners Conduct Landscape Plant Variety Trials

*Kelly Young, Karl Wyant

(211) Regional IPM Webinars Reach Large Extension Master Gardener Audiences

*Mary Hockenberry Meyer, Karen Jeannette, Jeff Gillman, Michelle Grabowski, Rhoda L. Burrows, Pamela J. Bennett

(212) What are the Economic Costs and Benefits of Home Vegetable Gardens?

*Gail Langellotto

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

Tuesday, July 23, 2013

(213) Importance and Scope of Horticultural Crops in India—A Commercial Approach

Ramesh Joshi, *M.L. Agarwal, Dilip Nandwani

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Crop Physiology

(296) The Effects of Plant Hormones on Root Growth and GmEXPB2 Expression in Soybean

*Xinxin Li, Hye-Ji Kim, Hong Liao

(297) Laurel Wilt Differentially Affects Xylem Sap Flow of Three Avocado Cultivars

*Bruce Schaffer, Randy C. Ploetz, Ana I. Vargas, Joshua L. Konkol, Juanpablo Salvatierra

(298) Increasing Root Zone Ca₂ Concentration Will Decrease Uptake and Transport of Na⁺ and Enhance Plant Growth of *Pistacia* Species Grown in Saline Soils

*Morad Mortaz

(299) Analysis of Cold Hardiness, Dehydrins, and Their Gene Expressions during Cold Acclimation and Deacclimation in Four Peach Cultivars (*Prunus persica*)

*Keum-Sun Kim, Hyunsuk Shin, Youngjae Oh, Seolah Kim, In-Chang Son, Daeil Kim

(300) Evaluating Physiological Efficiencies of Branching Structure in Low-intensity Tart Cherry and High-density Apple

*Zachary Brym, Brent Black

(301) Measuring Soil Water Potentials in Horticultural Substrates at Very Low Water Potentials

Jeb S. Fields, William C. Fonteno, *Brian Jackson

(302) The Effect of Artificial Pollination and Growth Regulator Applications on Olive Trees under Mexican Desert Conditions

*Raul L. Grijalva-Contreras, Saul A. Grijalva-Durón, Arturo López-Carvajal, Fabian Robles-Contreras, Manuel de Jesús Valenzuela-Ruiz, Ruben Macias-Duarte

(303) Enlarged Olive Fruit on 'Manzanita' under Arid Conditions

Arturo López-Carvajal, *Raul L. Grijalva-Contreras, Adan Fimbres-Fontes, Fabian Robles-Contreras, Ruben Macias-Duarte

(304) Heat Determination of Growth in *Pistachia vera* Cultivars

*Cara J. Allan

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Genetics and Germplasm

(345) Collection and Evaluation of Tung Tree (*Vernicia fordii*) Germplasm Resources in China

*Hongxu Long, Xiao-Feng Tan, Lin Zhang, Donglin Zhang, Yan-Ling Zeng, Shanna Wen

(346) The Open Source Seed Initiative

*Irwin L. Goldman, A. Argumedo, Micaela Colley, Julie Dawson, Patrick Hayes, Kristina Hubbard, Stephen Jones, Jack Kloppenburg, Ben Lilliston, Claire H. Luby, Ana Micka, Thomas E. Michaels, Frank Morton, James R. Myers, John P. Navazio, Erin Ogden, Theresa Podoll, Julie Ristau, Rene Salazar, Adrienne Shelton, Michael Sligh, Tom Stearns, William F. Tracy, Jared Zystro

(347) Collection of North American Plums (*Prunus* spp.) for Use as Germplasm and Genetic Resources

*Dario J. Chavez, Thomas G. Beckman, José Chaparro

(348) An Economical Molecular Tool for Genetic Identity Confirmation in Blueberry

Amira Bidani, Kim E. Hummer, Lisa J. Rowland, Susan McCallum, *Nahla V. Bassil

(349) Characterization of Libyan Olive (*Olea Europaea* L.) Cultivars using Morphological Data

*Salem Abdul, Gayle Volk, Christopher Richards, Harrison Hughes

(350) Carotiger: A New, Late-season Peach Cultivar for the Southeastern United States

*Desmond R. Layne, W.C. Newall, Jr., David W. Cain

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Graduate Student Poster Competition—Session 3

Sign up at the time of abstract submission was required. Full competition schedule begins on p. 16.

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Herbs, Spices, and Medicinal Plants

(168) Field Performance and Medicinal Constituents of *E. Purpurea* and *E. Angustifolia* Varieties Grown in Eastern Washington

*John Balles, Jat Rana, Dale J. Schipper, Jessica Corcoran

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

Tuesday, July 23, 2013

(169) Mint in Mississippi Nitrogen Fertilizer Study

*Thomas E. Horgan, Crofton Sloan, Charles Cantrell,
Dennis Rowe, Valtcho D. Jeliakov

(170) Comparison of Anthocyanin Contents in
Amaranth Sprouts According to the Different
Cultivation and Low-temperature Treatment

*Su-Young Hong, Kwang-Soo Cho, Young-Ho Yoon, Sr.,
Su Jeong Kim, Jung-Hwan Nam, Oh-Keun Kwon,
Hwang-Bae Sohn

(171) Characterizing Biomass Accumulation and
Nutrient Uptake In Situ over Time in Wisconsin
Peppermint and Spearmint

*Katie A. Bolssen, Alvin J. Bussan

(172) Identification of Host Resistance to Basil Downy
Mildew (*Peronospora belbahrii*)

*Robert Pyne

(173) Source-demand Relations in Varieties of Basil in
Two Protected Environments

*C.R. Juarez-Rosete, J.A. Aguilar-Castillo,
M.E. Juarez-Rosete, P. Juarez-Lopez, E. Cruz-Crespo

(174) The Effect of Population Density in the Yield of
Two Varieties of Roselle (*Hibiscus sabdariffa*) Grown
in Nayarit, Mexico

*Porfirio Juarez-Lopez, Francisco de Jesus Caro-Velarde,
Eric Andrade-Martínez, Ruben Bugarin-Montoya,
Maria Luisa Machuca-Sanchez

(175) Photosynthesis and Harvest of Deltoid *Synurus*
(*Synurus delitodes*) under Different Light
Environments

*Heesun Noh

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Marketing and Economics

(056) Estimating Value of e-Xtension Grape
Community of Practice Spanish-translated Articles

*Eric Stafne, Matthew W. Fidelibus

(057) Economic Profitability of Growing Lettuce and
Tomato in Western Washington under High Tunnel and
Open Field Production Systems

*Carol A. Miles, Suzette P. Galinato, Debra Inglis

(058) Optimal Location of Postharvest Broccoli
Facilities in Western New York

*Juan N. Hernandez-Aguilera, Thomas Björkman,
Miguel Gómez

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Ornamentals/Landscape and Turf

(030) Green Roofs: Water Recycling Effect on Water
Quality and Soil Chemistry

*Kirk Laminack, Jacqueline Aitkenhead-Peterson,
Anthony Camerino, Astrid Volder

(031) The Growth Habits of the Ornamental Gunnera in
a Costa Rican Natural Habitat

Clarice Esch, *Martin Stone

(032) Conversion of Tall Fescue to Seeded or
Vegetatively Propagated Bermudagrass and Seashore
Paspalum

*Marco Schiavon, Brent Barnes, David A. Shaw,
J. Michael Henry, James H. Baird

(033) Does Propagation Method Impact Survival and
Growth of Below Grade Planted Trees?

*Michael A. Arnold, Andrew R. King, Donita L. Cartmill

(034) Granular Fertilizer Formulations Affect Nutrient
Uptake in Perennial Ryegrass Turf

James H. Baird, *Tyler J. Mock, Nick Hoisington

(035) Full Sun Landscape Trial of Caladiums in
Southeastern Louisiana

Yan Chen, Regina P. Bracy, *Allen D. Owings

(036) Urban Tree Selection in a Changing Climate

*Bert Cregg, Dana Ellison

(037) Early Germination Response of Lodgepole Pine
Seeds to Imbibition with a Commercial Extract of
Ascophyllum nodosum

Joanne E. MacDonald, B.I. Daigle, *Will Neily,
Jeffrey Norrie

(038) Daily Fluctuations of Chlorophyll Efficiency of
Dark-adapted Rhododendron and Kidney Beans

*Heather Hammack, Craig Ramsey, Steven Earl Newman

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Plasticulture

(052) Adoption of Plastic Mulch and Drip Irrigation by
Small Limited Resource Farmers in North Carolina

Grace Summers, Kurt Taylor, Patricia Perez, *Sanjun Gu,
Rickie Holness

(053) Effect of Biodegradable Mulches on
Environmental Data Collected from High Tunnel and
Open Field Settings

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

Tuesday, July 23, 2013

*Carol A. Miles, Xiaoci Ji, Jeffrey T. Martin,
Russell W. Wallace, Annette L. Wszelaki,
J. Moore-Kucera, Debra Inglis, Jaehoon Lee

(054) Grafting Influences on Fruit Yield of Tomatoes
Grown in a High Tunnel

*Peter J. Nitzsche, Jack Rabin, Daniel Ward,
Wesley L. Kline

(055) Leafy Vegetable and Herb Production and Costs
in High Tunnels in the Arid Southwest

Ursula K. Schuch, *Kristen Hanson, Tilak Mahato

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Pomology

(089) Apple Rootstock Response to Prohexadion
Calcium and SPAD Readings in a Non-cropping Year

*Robert M. Crassweller, Donald E. Smith

(090) Changes of Cold Hardiness, Dehydrins, and
Their Gene Expressions in Response to Deacclimation
and Reacclimation in Peach (*Prunus persica*)

*Daeil Kim, Keum-Sun Kim, Youngjae Oh, Seolah Kim,
In-Chang Son, Hyunsuk Shin

(091) Quality of Bartlett Pears Subjected to
Phytosanitary Irradiation Treatment Followed
by Commercial Distribution and Simulated Retail
Display

*Sokrith Sea, Anuradha Prakash

(092) Differential Effects of Deficit Irrigation and
Reflective Mulch Application on Two Clingstone Peach
Cultivars

*Eleni D. Pliakoni, George D. Nanos

(093) Morphological Characterization of Early Floral
Development in Apple, Pear, and Cherry in the
Midwestern United States

P. Francescato, Jozsef Racsko, *Diane Doud Miller

(094) Boron Phloem Mobility and Boron Levels in
Leaves and Fruit Are Altered in Transgenic Apple Trees
with Decreased Sorbitol Synthesis

Ting Wu, Michael Rutzke, Abhaya M. Dandekar,
*Lailiang Cheng

(095) Turning the Shaded Side of Apple Fruit to
Sunlight Exposure Increases Flavonoids and Total
Phenolics in Both the Original Shaded Peel and the
Original Sun-exposed Peel of 'Fortune' and 'Mutsu'

Fengjuan Feng, Mingjun Li, *Lailiang Cheng

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Postharvest

(392) Developmental-dependent Responses of
Beit-Alpha Cucumber Fruit to Ethylene are
Associated with Re-Dox Homeostasis

Jinsu Lee, *Donald J. Huber, Eduardo C. Vallejos

(393) Leucine Catabolism Affects Acetate Ester
Production in Bananas (cv. Senorita)

*Sumithra K. Wendakoon, Hajime Furukawa

(394) Assessing Superficial Scald Risk in Granny
Smith Apples during Controlled Atmosphere Storage
using Biomarker-based Technology

*David R. Rudell, Jinwook Lee, James Mattheis,
Rachel Leisso, David Buchanan, Christopher B. Watkins,
Maarten Hertog, Nigel Gapper, Bart Nicolai,
James Giovannoni

(395) Evidences from Individual Studies of Ethylene
and 1-MCP Treatment Prove that Volatile Biosynthesis
Is Regulated by Ethylene in Apple (cv. 'Golden
Delicious')

XiaoTang Yang, *Jun Song, Leslie Campbell-Palmer,
Sherry Fillmore, ZhaoQi Zhang

(396) Postharvest Treatments to Maintain Quality
and Control Diseases of Cut Flowers

Lihua Fan, *Jun Song, Li Li, Tim Hughes,
Leslie Campbell-Palmer, XiHong Li

(397) Fishing for Biomarkers; A Multivariate
Approach to Scrutinize the Combined Metabolome-
Transcriptome Profiles on Our Quest toward
Biomarkers for Postharvest Apple Disorders

David R. Rudell, Maarten Hertog, Nigel Gapper,
*Christopher B. Watkins, James Giovannoni,
James Mattheis, Jinwook Lee, Rachel Leisso

(398) Reversal of the Petal Senescence Process and
Ethylene Responses in Carnations

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

(399) Storability and Phenolic Compounds Profile of
Organically Grown Blackberries

*Moo Jung Kim, Penelope Perkins-Veazie, Guoying Ma,
Gina Elizabeth Fernandez

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

Tuesday, July 23, 2013

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Root Growth and Rhizosphere Dynamics

(249) Determining Root Hydraulic Conductance of Container-grown Plants as an Assessment of Root Mass

*Lesley A. Judd, Brian Jackson, William C. Fonteno, Jean-Christopher Domec

(250) Mini-Horhizotron: A Nondestructive Technique for Observing and Measuring Growth of Developing Root Systems during Production

*Lesley A. Judd, Brian Jackson, William C. Fonteno

(251) Rhizometer: A Technique for Observing and Measuring Root Growth and Their Influence on Substrate Physical Properties In Situ

*Lesley A. Judd, Brian Jackson, William C. Fonteno

(252) Root Traits of Twelve Pecan Accessions of Varying Origin

*Astrid Volder, Larry J. Grauke

(253) Assessing Root Characteristics of Cucurbit Rootstocks using a Simple Germination Test

Nhi Nguyen, *Xin Zhao, Wenjing Guan, Richard L. Hassell

(254) Axenic Culture Growth Optimization of Adventitious Root Promoting Endophyte, *Piriformospora indica*

*Allison Hope Justice

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Vegetable Crops Management

(152) Black Oat Cover Crop Management in Watermelon Production Systems

*Donald J. Makus, Larry M. Zibilske

(153) Effect of Deficit Irrigation on Pigment Content, Photosynthesis, Growth, and Yield of Cabbage

*Chenping Xu, Daniel Leskovar

(154) Biofumigant Performance of Four *Brassica* Crops in an Irrigated Chile Pepper Rotation System

*Rachel Rudolph, Stephanie Walker, Mark Uchanski

(155) Modeling Environmental Parameters Affecting Processing Pea Yield in Minnesota

*Charles L. Rohwer, Vincent A. Fritz

(156) Cover Crops and Tillage Systems: Three Years of Impacts on Soil Characteristics and Sweetpotato Yield in North Mississippi

Jeffrey L. Main, *Ramon A. Arancibia, William B. Evans

(157) Cover Crops in Conventional Tillage System: Three Years of Impacts on Soil Characteristics and Sweetpotato Yield in North Mississippi

Jeffrey L. Main, *Ramon A. Arancibia, William B. Evans

(158) Living Mulch Cover Crops on Small Parcels for Urban and Small-scale Applications

*Anne Pfeiffer, Jed Colquhoun, Erin Silva

(159) Comparing Minirhizotron and Soil Core Methods for Measuring Root Growth of Melons under Deficit Irrigation

*Sat Pal Sharma, Daniel Leskovar, Kevin M. Crosby, Astrid Volder, Amir Ibrahim

12:30–1:30 PM

Desert Salon 1-2

Association of Collegiate Branches (ACB) Annual Business Meeting

Presiding: Yessica Garcia, ACB President

1:00–1:30 PM

Springs Salon C

B.Y. Morrison Reception

Sponsored by the Agricultural Research Service

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Citrus Crops

(103) The Effects of Huanglongbing and Foliar Nutritional Treatments on Orange Flavor

*Elizabeth Baldwin, Anne Plotto, Jinhe Bai, John A. Manthey, Sharon Dea, Smita Raithore, Michael Irely, Cecilia Nunes, Randall Cameron, Gary Luzio, Jan Narciso

(104) Evaluating the Effects of Controlled Release Fertilizer Application Rate and Watering Regime on Photosynthesis and Growth of Potted Grapefruit Foliage

*Barrett Gruber, Prem Kumar

(105) Seasonal Production of Phloem Tissue in HLB-affected Citrus Trees

*Ed Etxeberria, Craig Brodersen, Cody Narciso

(106) Microsprinkler Location in Citrus

*N.V. O'Connell, L.J. Schwankl

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

Tuesday, July 23, 2013

(107) Results of Providing Weekly Data on Citrus Tree Cold Acclimation to Florida Growers

*Chris Oswalt, Timothy M. Spann, Arnold W. Schumann

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Graduate Student Poster Competition— Session 4

Sign up at the time of abstract submission was required.

Full competition schedule begins on p. 16.

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Nursery Crops

(046) Plant Growth Regulators Increase Branching of *Hydrangea paniculata* ‘Limelight’ and ‘Jane’ (Little Lime™)

*Diana Cochran, Amy Fulcher

(047) The Effect of Selected Herbicides on Growth of Aucuba and Flowering of Scaevola

*H. Brent Pemberton, William R. Roberson

(048) Use of Biocontainers in Pot-in-Pot Nursery Production System

*Tongyin Li, Guihong Bi, Genhua Niu, Susmitha Nambuthiri, Robert L. Geneve, Xueni Wang, Rodney Thomas Fernandez, Amy Fulcher, Youping Sun

(049) The Use of Topflor G in Knockout Rose Container Production

Yan Chen, Regina P. Bracy, *Allen D. Owings

(050) Transplant Establishment of Container-grown Plants Produced in Eastern Redcedar Substrate

Travis R. Carmichael, *Cheryl R. Boyer, Jason J. Griffin, Stuart L. Warren

(051) Increased Chlorophyll Efficiency of Dark-adapted Camellia Foliage when Treated with Chlorine Dioxide or Hydrogen Peroxide and Blended with an Ionic Surfactant

*Debra Newman, Heather Hammack, Craig Ramsey, Steven Earl Newman

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Organic Horticulture

(075) First Year Primocane Yield Data of Advanced Thorny and Thornless Primocane-fruited Blackberry Selections at Kentucky State University

*Jeremiah Lowe, Kirk William Pomper, Sheri B. Crabtree, John R. Clark, John G. Strang

(076) The Presence of Genetic Modification in USDA Organic Certified Corn and Soy Food Products

*Ryan Phelps, Hannah Simmons, Hannah Weber, Corbin LeMieux, Naomi Rowland, Martin Stone

(077) A Comparison Study on Productivity and Bulb Quality of Organically and Conventionally Grown Bulb Onion

*Jongtae Lee, Sunyeong Lee, Byeonggyu Min, Sunkyong Hwang, Injong Ha, Jinseong Moon, Heedae Kim, Haejun Hwang, Chiwoong Ro

(078) Identification of Phytohormones Present in Vermicompost Tea and Their Effect on Growth and Yield of Tomato

*Abira Selvaraj, Milton E. McGiffen, Jr., Carol J. Lovatt

(079) Location, Cropping System, and Genetic Background Influence Carrot Performance, Including Top Height and Flavor, in the CIOA (Carrot Improvement for Organic Agriculture) Project

*Philipp W. Simon, John P. Navazio, Micaela Colley, Lori Hoagland, Philip A. Roberts, Lindsey du Toit, Tim Waters, Erin Silva, Jed Colquhoun, Joe Nunez, Cathlen McCluskey, Jared Zystro

(080) The Optimal Time to Establish Late-summer Cover Crops in the Great Lakes Region

Carolyn Lowry, Joseph W. Shail, Jr., Daniel C. Brainard, *Thomas Björkman

(081) A New Economic Assessment Tool for Organic Apple Producers

German Rodriguez, Jennie H. Popp, *Curt R. Rom, Heather Friedrich, Jason McAfee, Haxhire Myrteza, Haxhire Myrteza

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Propagation

(332) The Effect of Nitrogen Application on Bud Take, Scion Growth, and the Level of Endogenous Cytokinins in Shoots of Trifoliate Orange Rootstocks

*Gurreet Brar, Timothy M. Spann

(333) The Effect of Auxin on Vegetative Propagation of *Idesia polycarpa* Maxim

Barrett Wilson, *Matthew D. Taylor

(334) Clonal Propagation of Stem Cuttings of *Spigelia Marilandica*, *S. Gentianoides* Var. *Alabamensis*, and *S. Marilandica* × *S. Gentianoides* Var. *Alabamensis* F₂ and F₃ Hybrids

Amanda J. Hershberger, *Carol D. Robacker

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

Tuesday, July 23, 2013

(335) Micropropagation of *Ostrya virginiana* (Mill.) K. Koch

*Juan R. Franco Coronado, Todd P. West

(336) In Vitro Germination of *Ostrya virginiana* (Mill.) K. Koch using Gibberellic Acid as a Substitute for Overcoming Seed Dormancy

*Juan R. Franco Coronado, Todd P. West

(337) Development of Cutting Propagation Techniques of *Deutzia amurensis*

Wei He, Xinjian Wang, Yunde Tan, *Hongxu Long, Donglin Zhang, Lin Zhang

(338) Rootstock Age Affects Grafting Ability and Rootstock Re-rooting of Grafted Watermelon Transplants

*Shawna Daley, Richard L. Hassell

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Seed and Stand Establishment

(245) Evaluation of Seed Treatments for Sweet Corn at Sixteen Locations in the United States

*Carrie H. Wohleb

(246) The Use of a Photosensitive Film during Lettuce Seed Production for Improving Germinability

*Samuel Contreras, Paloma Segura

(247) Delayed Seeding of Muskmelon (*Cucumis melo*) following Spring *Brassica* Cover Crop Incorporation Improves Seedling Emergence

*Aaron Yoder, Mathieu Ngouajio

(248) Bioassay of *Pythium* and *Rhizoctonia* in a Peat-based Substrate Amended with Pine Wood Chip Aggregates

W. Garrett Owen, *Brian Jackson, William C. Fonteno, D. Michael Benson

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Vegetable Breeding

(364) Evaluation of Lettuce Germplasm for Response to Bacterial Leaf Spot

*Huangjun Lu, Richard Raid

(365) Genetic Study of the Banded Cucumber Beetle Resistance in Romaine Lettuce Cultivar Valmaine

*Huangjun Lu, Ramkrishna Kandel, Gregg Nuessly, Heather McAuslane

(366) Measuring Selection Progress in Onion Germplasm after One Selection Cycle for Reduced Iris Yellow Spot Symptom Expression

*Christopher S. Cramer, Neel Kamal

(367) Screening of Cucumber Plant Introduction Accessions for Resistance to *Phytophthora capsici*

Marivi Colle, Elizabeth Straley, Sue A. Hammar, *Rebecca Grumet

(368) Selection Progress for Reduced Iris Yellow Spot Symptom Expression in Onion

*Narinder Singh, Christopher S. Cramer

(369) Participatory Evaluation of Broccoli Varieties Grown under Organic Conditions in Western North Carolina

Emily R. Bernstein, *Jeanine M. Davis

(370) QTL Mapping for Quinone Reductase Activity in Broccoli with Hepa1c1c7 Cell Lines

Kang Mo Ku, *Gad G. Yousef, Ivette Guzman, Michael A. Grusak, Elizabeth Jeffery, John A. Juvik, Eric W. Jackson, Allan F. Brown

(371) Differential Response of Taro (*Colocasia esculenta*) Cultivars to Taro Leaf Blight

*Susan C. Miyasaka, Michael Shintaku, Heather Kimball, Kurt Lamour

(372) Managing Downy Mildew of Spinach: A Genomics-based Approach

*James C. Correll, Burton H. Bluhm, Kurt Lamour, Steven T. Koike, Lindsey J. Du Toit, D. Neil McRoberts, Chunda Feng, Saara Mansouri

(373) A Promising Breeding Strategy for Improving Tuber Quality in Chipping Potatoes

Cinthya Zorrilla, Felix Navarro, Sandra E. Vega, *Jiwan P. Palta

(374) Productivity and Quality of New Onion Varieties Bolting Resistant in Northeast Sonora, Mexico

Ruben Macias-Duarte, *Raul L. Grijalva-Contreras, Fabian Robles-Contreras, Manuel de Jesús Valenzuela-Ruiz, Arturo López-Carvajal

(375) Evaluation of Segregating Tomato Lines for Salinity Tolerance

*Abdulla A. Alsadon, Monther Sadder, Mahmoud Wahn-Allah

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

Tuesday, July 23, 2013

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Viticulture and Small Fruits

(114) Patterns of Variation for Sugar and Organic Acid Composition during Berry Ripening in Cold Climate Wine Grape Cultivars

*Soon Li Teh

(115) Understanding the Causes of Flower Necrosis in Grapevines

*R. Paul Schreiner, Jungmin Lee, Patricia A. Skinkis

(116) Chlorine Dioxide Sachets for the Control of Postharvest Decay of ‘Crimson Seedless’ Table Grapes

*Xiaofan Zhao, Jan Narciso, Sonet Van Zyl, Joseph Smilanick

(117) The Influence of Post-veraison Foliar Potassium Applications on Table Grape Berry Quality

*Sijie Zhu, David Obenland, Sonet Van Zyl, Franka Gabler, Joseph Smilanick

(118) The Evaluation of Different Cultural Practices on Scarlet Royal Table Grapes to Determine Postharvest Quality

*Victoria Towers, Sonet Van Zyl

(119) Impact of Yield Management Practices on Vine Growth and Fruit Composition of Oregon Pinot Noir

*Patricia A. Skinkis, Amanda J. Vance, Alison L. Reeve

(120) Using Electrical Resistance Sensors for Monitoring Soil Moisture to Determine Table Grape Water Consumption in the Caborca Sonora Region

Manuel de Jesús Valenzuela-Ruiz, Fabian Robles-Contreras, *Raul L. Grijalva-Contreras, Ruben Macias-Duarte

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Weed Control and Pest Management

(214) Biology & Biocontrol of Lewis Spider Mite (*Eotetranychus lewisi*) in Strawberries

*Anna D. Howell, Oleg Daugovish, Cameron Chandler

(215) The Newly Sporadic and Major Insect Pests of Orchard Crops in Gyeonggi Province in South Korea

*Young-su Lee, Hyun-Ju Lee, Soon-sung Hong, Haejeen Bang

(216) Hydrilla IPM RAMP—Starting a Statewide Extension Project

*Kenneth T. Gioeli, James P. Cuda, Jennifer Gillett-Kaufman, Joan P. Bradshaw, William A. Overholt, Verena Lietze, Judy Shearer, Raymond L. Hix

(217) Improving Pest Control Options through Split Application of Insecticides using Spike Wheel Liquid Injection Technology

Mark C. Siemens, *Kurt D. Nolte

(218) Development of Native Natural Predator, *Chrysoperla nipponensis* (Okamoto) for the Control of Mealy Bugs, *Pseudaulacaspis cockerelli* (Cooley) at Five Flavor Berry, *Schisandra chinensis* Baill Orchard in Korea

*Eunhye Ham, Jeung Sul Han, Young-su Lee, Jun Seok Lee, Jong Kyun Park

(219) Studies on Biological Control of Yellow Tea Thrips; *Scirtothrips dorsalis* Hood (Thysanoptera: Thripidae) on Five Flavor Berry Orchards; *Schisandra chinensis* Baill, using *Amblyseius swirskii* Athias-Henriot

*Eunhye Ham, Jeung Sul Han, Young Cheol Choi, Jun Seok Lee, Jong Kyun Park

(220) Bark Beetle Flight in Relation to Lodgepole Pine Host Chemistry: Another Case for Coevolution?

*Teri Gadd, William L. Bauerle, Ingrid Aguayo, Lou Bjostad

(221) Biological Control of White Mold of Snap Bean with Low Rate Contans Applications

*Alexandra Stone, Mikio Miyazoe, Aaron Heinrich

(222) The Effect of Clopyralid Rate on Annual Strawberry Production and Black Medic (*Medicago lupulina*) Control

*Peter Dittmar

(223) Influence of Trichoderma Application on Seed Germination and Seedling Biomass of Jamaican Scotch Bonnet Peppers

*Luke O. Lee, Corrie P. Cotton, Fawzy M. Hashem

(224) Heat-Induced Inactivation of Seed Germination in Canola (*Brassica napus*), Grain Amaranth (*Amaranthus caudatus*), and Proso Millet (*Panicum miliaceum*)

*Chiwon W. Lee, Larry J. Cihacek

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Tuesday, July 23, 2013

1:00–3:00 PM

Desert Salon 3

Endowment Fund Committee Meeting

Chris Gunter, *Chair*; Bernadine Strik; Beiquan Mou; Rich Marini; Chris Gunter; Marietta Loehrlein; Astrid Volder; Paul E. Read; Carl E. Sams; Paul Thomas; Brian Trader; Paul Bosland; David Hensley; Michael W. Neff

1:30–2:30 PM

Springs Salon C

USDA–ARS All Employee Meeting

Presiding: Sally Schneider

1:45–3:00 PM

Springs Salon A/B

Oral Session—Herbs, Spices, and Medicinal Plants

Moderator: Valtcho D. Jeliaskov, vjeliask@uwyo.edu

1:45–2:00 PM

Essential Oil Yield, Composition, and Bioactivity as a Function of Distillation Time

* Valtcho D. Jeliaskov, Charles Cantrell, Tess Astatkie, Thomas E. Horgan, Vicki L. Schlegel, Ekaterina Jeliaskova

2:00–2:15 PM

Drying and Shade Effects on Native Spearmint Oil Yields and Composition

*Valtcho D. Jeliaskov, Ekaterina Jeliaskova, Tess Astatkie

2:15–2:30 PM

Study on Spearmint and Japanese Cornmint in Mississippi

*Thomas E. Horgan, Crofton Sloan, John McKee, Charles Cantrell, Dennis Rowe, Valtcho D. Jeliaskov

2:30–2:45 PM

Peppermint and Spearmint in Wyoming Can Survive the First Fall Frosts

*Valtcho D. Jeliaskov, Charles Cantrell, Tess Astatkie, Ekaterina Jeliaskova

2:45–3:00 PM

Effectiveness of Some Plant Extracts to Bacterial Speck Disease on Tomato

*Kubilay Kurtulus Bastas

1:45–3:30 PM

Desert Salon 13-14

Oral Session—Public/Commercial Horticulture/Computer Applications in Horticulture

Moderator: Peter Ling, ling.23@osu.edu

1:45–2:00 PM

Community Engaged Collaborative Design of a New Children's Garden at a Public Garden

Dana R. Reynolds, *Lucy K. Bradley, Julieta T. Sherk, Julia L. Kornegay

2:00–2:15 PM

USAID Supporting the Fruit and Vegetable Pulp Sector in Pakistan

*Waqar Ahmed, Muhammad Azher Nawaz, Khalid Saeed Wattoo, Babar Malik, Raheel Anwar

2:15–2:30 PM

Consumer Preferences for Longevity Information and Guarantees on Cut Flower Arrangements

*Alicia L. Rihn, Chengyan Yue, Charles R. Hall, Bridget K. Behe

2:30–2:45 PM

Dynamic Plant Water Use Measurement using Data from a Low-cost Weighing Lysimeter

*Peter Ling, Robert Boucherle, Jonathan M. Frantz

2:45–3:00 PM

Building Database Resources for Translational Research in Rosaceae

*Sook Jung, Taein Lee, Stephen Ficklin, Chun-Huai Cheng, Anna Blenda, Sushan Ru, Ping Zheng, Katherine Evans, Cameron Peace, Nnadozie Oraguzie, Albert Abbott, Desmond R. Layne, Mercy A. Olmstead, Fred Gmitter, Chunxian Chen, Lukas Mueller, Dorrie Main

3:00–3:15 PM

Development, Testing, and Application of a Process-based Crop Simulation Model for Garlic

*Soo-Hyung Kim, Jighan Jeong, Lloyd Nackley, Kyung Hwan Moon, Soo-Ock Kim, Jin I. Yun

3:15–3:30 PM

Building Capacity in Public Horticulture through Strategic Partnerships and Cooperative Education

*Brian Trader, Douglas C. Needham

1:45–3:45 PM

Desert Salon 4-6

Workshop—Plasticulture Technologies for Expanding the Season and Improving the Sustainability of Eastern U.S. Strawberry Production

Sponsor: Plasticulture Working Group

Moderator: Peter Nitzsche; nitzsche@aesop.rutgers.edu

Coordinator: Barclay Poling; strawberrydoc@gmail.com

In this workshop leading university and industry experts in commercial strawberry plasticulture production in the Eastern

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Tuesday, July 23, 2013

United States will provide the most up-to-date, expert information on plasticulture technologies for expanding the season and improving strawberry production sustainability. Belinski Santos, IFAS, University of Florida will be discussing increasing the biological feasibility of high tunnel production of strawberries in Florida. Non-irrigation alternatives for freeze protection of strawberries utilizing floating row covers will be covered in two of the presentations, and the benefits of row covers in the fall season to enhance floral initiation and differentiation will be discussed by strawberry researchers from the mid-west (Ohio) and mid-south (North Carolina).

1:45–2:00 PM

Non-irrigation Alternatives for Freeze Protection of Strawberries in Florida

*Bielinski M. Santos, Ixchel M. Hernandez-Ochoa, Craig Stanley

2:00–2:15 PM

Biological Feasibility of High Tunnel Production of Strawberries in Florida

*Bielinski M. Santos, Teresa Salame-Donoso

2:15–2:30 PM

Ohio Strawberry Plasticulture Row Cover Management

*Brad R. Bergefurd

2:30–2:45 PM

Practical Opportunities to Reduce Sprinkler Irrigation Usage with Row Cover Technology for Pre-bloom and Bloom Cold Protection and Preliminary Observations on using Drip Irrigation under Row Covers for Frost Control

*Barclay Poling

2:45–3:00 PM

Modeling Yield of ‘Chandler’ and ‘Camarosa’ as a Function of Accumulated Fall Growing Degree Days and Practical Row Cover Intervention Strategies

*Jeremy Pattison, Elizabeth Clevinger, E. Barclay Poling

1:45–3:45 PM

Springs Salon D/E

Workshop—Potential Impact of Precision Agriculture Methods on Roots and Root Function

Sponsor: Root Growth & Rhizosphere Dynamics Working Group

Moderator: R. Paul Schreiner, paul.schreiner@ars.usda.gov

Coordinator: R. Paul Schreiner, paul.schreiner@ars.usda.gov

The purpose of this workshop is to explore how precision agriculture may influence root and soil properties and provide a conceptual framework to better understand how farming

practices can improve the efficiency of resource use in horticulture.

1:45–2:15 PM

Introduction to Precision Agriculture in Florida Citrus, with Emphasis on Fertilization and Irrigation

*Arnold W. Schumann, Qamar Zaman

2:15–2:45 PM

Spatial Variability in C&N Dynamics: Vineyard to AVA

*Kerri Steenwerth

2:45–3:15 PM

Site-specific Management of Soil pH and Nutrients in Blueberry

*David R. Bryla

3:15–3:45 PM

New Methods to Quantify Root Responses to Variable Water or Nutrient Supply

*Taryn Bauerle

1:45–3:45 PM

Desert Salon 1-2

Workshop—Teaching Online: What’s Working, What’s Not Working

Sponsor: Teaching Methods Working Group

Moderator: David Kopsell, dkopsell@ilstu.edu

Coordinator: David Kopsell, dkopsell@ilstu.edu

This workshop will allow participants to share their online teaching experiences covering a multitude of horticultural topics and lecture/lab formats. The main objective will be the sharing of successful and not-so-successful teaching techniques for the improvement of our teaching members.

2:00–3:00 PM

Desert Salon 12

Awards Committee Meeting

John R. Clark, *Chair*; William J. Lamont, Jr.; Fred T. Davies; Dewayne L. Ingram; Paul Bosland

2:00–3:00 PM

Desert Salon 11

Postharvest (PH) Working Group Business Meeting

David Obenland, *Chair*; John Beaulieu, *Chair-elect*; Wyatt Brown, *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.

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Tuesday, July 23, 2013

2:00–6:00 PM

Palm Springs Art Museum Tour

Tour Lobby

3:00–4:00 PM

Crop Physiology (CRPP) Working Group Business Meeting

Desert Salon 11

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.

3:00–4:00 PM

Federal Partners (FP) Working Group Business Meeting

Springs Salon C

Penelope Perkins-Veazie, *Chair*

The FP Working Group provides a network for horticultural professionals who work for national and federal governments. Objectives include: providing linkages to university and industry colleagues and to promote the exchange of ideas, common research goals, and multilevel approaches to large and/or complex issues affecting horticulture and food security.

3:00–4:00 PM

Graduate Student Activities Committee Meeting

Desert Salon 12

Kent Kobayashi, *Chair*; Cecilia McGregor; Bala Rathinasabapathi; Stuart Warren

3:00–4:00 PM

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

Desert Salon 3

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

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

4:00–5:00 PM

Commercial Horticulture (CHEX) Working Group Business Meeting

Desert Salon 3

Carol A. Miles, *Chair*; Gordon Johnson, *Chair-elect*

Objectives: To increase ASHS membership and meeting participation of horticultural extension specialists working with industry and/or community groups; foster communications between such specialists; and share ideas and methods for working with growers and commodity groups.

4:00–5:00 PM

Invasive Plants Research (INPR) Working Group Business

Desert Salon 11

Zhanao Deng, *Chair*; Gary Knox, *Chair-elect*

The INPR Working Group communicates 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.

4:00–5:15 PM

Oral Session—Propagation

Springs Salon D/E

Moderator: Chiwon W. Lee, chiwon.lee@ndsu.edu

4:00–4:15 PM

Adventitious Shoot Regeneration from Asiatic Lily
*Kedong Da, Hannah Farish-Williford, Samantha Smith, Barry Flinn

4:15–4:30 PM

Development of a Rooting Protocol for *Oenothera* Spp. Vegetative Cuttings
*Stephen Stanphill, Bruce Dunn

4:30–4:45 PM

Use of Unrooted Grafted Vegetable Cuttings: I. Effects of Healing Duration and Transportation Temperature
*Chieri Kubota, Mark A. Kroggel, Leo Sabatino, Brent Salazar

4:45–5:00 PM

The Effect of Rootstock Age on Grafting Ability, Re-rooting, and Field Performance of Grafted Watermelon Transplants
*Shawna Daley, Richard L. Hassell

5:00–5:15 PM

Germination Enhancement of Common Honeylocust (*Gleditsia triacanthos*) Seeds by Scarification
*Chiwon W. Lee, Saeum Choi, Karson Beckstrom, Todd P. West

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Tuesday, July 23, 2013

4:00–5:30 PM

Desert Salon 12

Annual Conference Technical Program Committee Meeting

Carl E. Sams, *Co-Chair*; Dennis Ray, *Co-Chair*;
Maren Mochizuki; Kent Kobayashi; Marita I. Cantwell;
Anita Azarenko; Brian Trader; Dean Kopsell; Jozsef Racsko;
Maria Jenderek; Paul Bosland; Michael W. Neff

4:00—5:30 PM

Desert Salon 1-2

Oral Session—Crop Physiology

Moderator: Charles A. Sanchez, sanchez@ag.arizona.edu

4:00–4:15 PM

Use of Pollen Vitality to Monitor the Nutritional Status of Flowers

*Thomas Ferrari

4:15–4:30 PM

Response of AVPI-OX Romaine Lettuce to Phosphorus

*Charles A. Sanchez, Roberto Gaxiola

4:30–4:45 PM

The Influence of Nitrogen Nutritional Status on the Physiological Response of *Cyphomandra betaceum* Seedlings to Flood Conditions

*Hermann Restrepo-Diaz, Augusto Ramirez-Godoy, Juan Carlos Melgar, Jorge-Edwin Betancourt, Diego-Leonardo Sanchez-Canro

4:45–5:00 PM

Variations in Calcium Requirements for In Vitro Shoot Culture among Potato Cultivars

Zienab F.R. Ahmed, *Jiwan P. Palta

5:00–5:15 PM

A Continuous Canopy Photosynthesis Measurement System for CAM Plants

*Dongxian He, Zejing Zhang, Guomin Zheng, Rongfu Gao, Genhua Niu

5:15–5:30 PM

Steady-state Chlorophyll Fluorescence Measurement for Photosynthesis Research of CAM Plants

*Dongxian He, Rongfu Gao, Zejing Zhang, Genhua Niu

4:00–5:30 PM

Desert Salon 13-14

Oral Session—Vegetable Breeding

Moderator: Haejeen Bang, hbang@tamu.edu

4:00–4:15 PM

Participatory Tomato Breeding for Virus Resistance

in Cental America

Raul Guerra, *James Nienhuis

4:15–4:30 PM

QTL Analysis for Early Blight Resistance in Tomato

*Dilip Panthee, Allen van Deynze, Sung-Chur Sim, David Francis

4:30–4:45 PM

Identification of a New Begomovirus Resistance Locus, “Ty-6” in Tomato

*Samuel F. Hutton, John W. Scott

4:45–5:00 PM

Alternative Splicing Variants and a New DNA Marker for an Allelic Selection of Lycopene Beta-cyclase in Watermelon

*Haejeen Bang, Sunggil Kim, Daniel Leskovar, Bhimanagouda S. Patil

5:00–5:15 PM

A New SNP Marker for Allelic Selection of Carotenoid Isomerase in Watermelon

*Haejeen Bang, Daniel Leskovar, Bhimanagouda S. Patil

5:15–5:30 PM

Isolation and Characterization of *DREB/CBF* Gene Orthologs in Lettuce

*Yuichi Uno, Keita Kudo, Itsumi Sugimoto, Nobushige Yonezawa

4:00—6:00 PM

Springs Salon A/B

Oral Session—Environmental Stress Physiology

Moderator: Leo Gene Albrigo, albrigo@ufl.edu

4:00–4:15 PM

Physiological and Growth Responses of Two Sweetpotato Cultivars at Early Season Soil Moisture Deficit

*Bandara Gajanayake, K.R. Reddy, Mark Shankle, Ramon A. Arancibia

4:15–4:30 PM

Morphological, Anatomical, and Physiological Adaptations of Potatoes to a Simulated Heat Stress

*Jiwan P. Palta, Justin E. Schabow

4:30–4:45 PM

Managing Drought Stress of Oranges to Optimize Flowering and Productivity under Sao Paulo–Mina Gerais, Brazil, and Florida Conditions

*Leo Gene Albrigo, Eduardo J. Chica, Ricardo R. Carrera

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4:45–5:00 PM

Mild Water Stress Affects Water Relations, Gas Exchanges and Vascular Flows of ‘Hayward’ Kiwifruit Branches during the Second Stage of Berry Development

Brunella Morandi, *Luca Corelli Grappadelli

5:00–5:15 PM

Chemical and Physiological Response of Turkish Red Pine (*Pinus brutia* Ten.) and American Red Pine (*Pinus resinosa* Ait.) Seedlings Exposed to Artificial Cold Temperature Treatments

Dilek Yildiz, Pascal Nzokou, Ayse Deligoz, *Ismail Koc, Musa Genc

5:15–5:30 PM

Comparative Investigation of Salinity-induced Drastic Effects on Leaf Water Status, Physiological, Enzymatic, and Ionic Attributes of Salt-tolerant and Salt-sensitive Okra Cultivars

*Muhammad Aslam Pervez, Tahira Abbas, Muhammad A. Shahid, C.M. Ayub, Muhammad Rashid Shaheen

5:30–5:45 PM

Mitigation of Salinity Induced Morpho-physiological and Biochemical Effects by Seed Treatment with 28-Homobrassinolide in Pea (*Pisum sativum* L.)

*Muhammad Adnan Shahid, Rashad M. Balal, Muhammad Aslam Pervez, Zafar Iqbal, Neil Mattson, Francisco Garcia-Sanchez

5:45–6:00 PM

Genetic Variability of Citrus Rootstock Cultivars under Saline Regime

*Rashad M. Balal, Muhammad Mumtaz Khan, Muhammad Adnan Shahid, Neil Mattson, Francisco Garcia-Sanchez, Muhammad Usman Ghazanfar

4:00–6:00 PM

Desert Salon 9-10

Workshop—Challenges in Seedling Production and Establishment in Organic and Sustainable Production Systems

Sponsor: Seed & Stand Establishment Working Group

Coordinator: Dharmalingam Pitchay, dpitchay@tncstate.edu

The working group will present new information and challenges related to organic seedling and stand establishments in comparison with conventional techniques. The focus would be to minimize losses in organic seedling supply chain and to promote transplanting in organic farming.

4:00–6:00 PM

Springs Salon E

Workshop—Create An Impact!

Coordinator: John D. Lea-Cox, jlc@umd.edu

The objective of this workshop is to demystify the impact-statement writing process. Participants will leave this workshop with a draft statement, specific to their research or extension project.

Speakers:

Thomas A. Bewick—Thomas Bewick is a national program leader at the U.S. Department of Agriculture. He serves as liaison to university scientists (as well as to the horticultural industry) on issues that affect horticulture, provides programmatic leadership and oversight for horticultural programs across the country, and directs the Specialty Crop Research Initiative.

Linda Brewer—Linda Brewer is a project manager and technical writer with the Department of Horticulture and the Extension Agriculture Program at Oregon State University. She successfully facilitated the adoption of an online reporting process for the Extension Ag faculty. Along with her grant reporting responsibilities, this activity shaped her thinking about the components of effective impact statements. She has led impact writing workshops for the faculty at Oregon State, and works one-on-one with faculty to develop useful, meaningful impact statements. <http://agsci.oregonstate.edu/research/writingimpacts>

Thomas Björkman—Thomas Björkman is the chair of the ASHS National Issues Task Force. He enjoys using compelling impact statements to persuade legislators, horticulture industry leaders, and other decisionmakers that horticultural scientists are doing important and exciting work that deserves much greater support. He finds writing his own impact statements just as difficult as everyone else does. He does research in crop physiology, with projects on improving vegetable production systems through the use cover crops and developing broccoli genotypes that will produce quality inflorescences in the eastern United States.

Marc van Iersel—Marc van Iersel is professor of plant nutrition and physiology in the Department of Horticulture at the University of Georgia. He serves as consulting editor for the *Journal of the American Society for Horticultural Science*, is a member of the national issues task force, and a past vice-president of ASHS.

John D. Lea-Cox—John Lea-Cox is a professor in the Department of Plant Science and Landscape Architecture at the University of Maryland, specializing in water

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Tuesday, July 23, 2013

and nutrient management issues. He currently serves as research vice-president for ASHS and with the support of Linda Brewer, Tim Rhodus, and Mike Neff, established CHRIS (<http://www.ashsmedia.org>) as an online repository to communicate the direct impacts of research and extension on horticultural industries, in the United States and beyond.

4:00–6:00 PM

Desert Salon 4-6

Workshop—The Role and Importance of Polyploidy in Ornamental Plant Breeding

Sponsor: Ornamental Plant Breeding Working Group

Moderator: Wenhao Dai, wenhao.dai@ndsu.edu

Coordinator: Ryan Contreras, ryan.contreras@hort.oregonstate.edu

This workshop will provide attendees with the current research on applications of polyploidy in ornamental plant breeding, particularly, in the areas of identification and induction of polyploids and utilization of polyploidy to breed new ornamental plant materials.

4:00–4:15 PM

Taking Advantage of Natural Variation in Ploidy Levels

*Ryan Contreras

4:15–4:30 PM

Ploidy Modifications Enhance Flower Breeding for Winter Hardiness and Rhizome Production in *Gaura*

*Neil O. Anderson

4:30–4:45 PM

Induction and Utilization of Polyploids to Sterilize *Nandina* and *Lantana*

*Zhanao Deng

4:45–5:00 PM

Applications of Ploidy Manipulation and Analysis in an Applied Nursery Crop Breeding Program

*Thomas G. Ranney

5:00–6:00 PM

Desert Salon 3

Collegiate Activities Committee (CAC) Meeting

Nathan Phillips, *Chair*; David Kopsell; Margaret J. McMahon; Stephanie Burnett; Donita Bryan; Kent Kobayashi; Rammohan Uckoo; Katherine Warpeha; Murali Panen; Cody Seals (ACB Vice President); Wade Hummer (Past ACB President)

5:00–6:00 PM

Desert Salon 3

Pomology (POM) Working Group Business Meeting

Clive Kaiser, *Chair*; Anish Malladi, *Chair-elect*

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

6:00–10:00 PM

Springs Salon D/E

Controlled Environments Student Competition

Organizer: Growth Chambers and Controlled Environments Working Group

Presiding: Gioia D. Massa

Please note: Each student competing in this competition will be giving their presentation in their session as outlined in the program and then they will repeat it a second time in this competition session.

Competition Participants:

Wesley Randall—Determining the Effectiveness of Red and Blue Light-Emitting Diodes as Supplemental Lighting during Seedling (plug) Propagation

Geoffrey Weaver—Reducing Evapotranspiration of Pansies: Efficacy and Duration of ABA and ABA-Analog Spray Applications

Peter Alem—Control of Poinsettia Stem Elongation: Height Limits Using Deficit Irrigation

Olyssa Starry—Effects of Water Availability and Temperature On CAM Expression and Water Use Efficiency by *Sedum Album* and *Sedum Kamtschaticum*

Rhuanito Soranz Ferrarezi—Subirrigation Controlled by Capacitance Sensors For Citrus Rootstock Production

Ricardo Hernández—Comparison of LED Supplemental Lighting and High Pressure Sodium Energy Consumption and Plant Responses of Cucumber and Tomato Transplants

Ismail Koc—Photosynthetic and Morphological Response of *Abies Fraseri* (Pursh) Poir to the Combined Effect of Irrigation and Fertilization in Controlled Environment

Celina Gomez—Comparison of Light-Emitting Diode Towers versus High-Pressure Sodium Lamps for Year-Round Production of High-Wire Greenhouse-Grown Tomatoes

Angelos I. Deltsidis—Development of Tomato Aroma Profiles during Low Temperature Storage in Air or CA and Recovery during Shelf Life

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Wednesday, July 24, 2013

Bandara Gajanayake—Physiological and Growth Responses of Two Sweetpotato Cultivars At Early Season Soil Moisture Deficit

Michael Dzakovich—A Semiyearly Study On the Effect of Light Quality on Flavor of Greenhouse Grown Tomatoes: LED Versus HPS

Diana Vercillo—Physiology of Solanaceous Scion and Rootstock Seedlings for Grafting in Low Temperature Storage Conditions under Low Light Intensity

6:00–10:00 PM

Desert Salon 3

American Pomological Society (APS) Executive and Advisory Board Meeting

Presiding: Kirk William Pomper

Wednesday, July 24, 2013

7:00–8:00 AM

Tour Lobby

Landscape and Ornamentals Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

7:30–1:30 PM

Tour Lobby

Joshua Tree National Park Tour

7:30 AM–5:00 PM

Center & North Registration
Counters

Registration Open

8:00–9:00 AM

Desert Salon 3

Water Utilization and Management (WUM) Working Group Business Meeting

Donald J. Merhaut, *Chair*; James S. Owen, *Chair-elect*;
Raul I. Cabrera, *Secretary*

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

8:00–9:15 AM

Springs Salon A/B

Oral Session—Plant Biotechnology

Moderator: Zong-Ming Cheng, zcheng@utk.edu

8:00–8:15 AM

Overexpression of the Atshi Gene in Poinsettia
(*Euphorbia pulcherrima*) Results in Compact Plants
*Jihong Liu Clarke

8:15–8:30 AM

Investigation of Sugar Metabolism in Pear
(*Pyrus bretschneideri*) Fruits using Integrated
Metabolomics

Xin Wang, Ying Huang, Min Xie, Linzhong Zhang,
Yunsheng Wang, Jun Sun, Oliver Yu, Wenhao Dai,
*Congbing Fang

8:30–8:45 AM

Proteomic Analysis of Gibberellins Increased Fruit
Sink Strength in *Pyrus pyrifolia*

Jiefa Li, Shiping Wang, Wenping Xu, Bo Wang,
Xiuming Yu, Lei Wang, Yusui Lou, Qi Yang,
*Caixi Zhang

8:45–9:00 AM

The Development of Cisgenic Grapevines

*Dennis J. Gray, T. Li Zhijian, Kyung-Hee Kim,
Dilma Daniela Silva

9:00–9:15 AM

The Evolutionary History and Diverse Physiological
Roles of the Grapevine Calcium-dependent Protein
Kinase Gene Family

*Zong-Ming Cheng, Fei Chen, Bin Cai, Marianna Fasoli,
Giovanni Battista Tornielli, Silvia Dal Santo,
Mario Pezzotti, Liangsheng Zhang

8:00–9:30 AM

Desert Salon 4-6

Oral Session—Vegetable Crops Management

Moderator: Ajay Nair, nairajay@iastate.edu

8:00–8:15 AM

The Effect of Biochar on Sweet Corn Production
*Ajay Nair, Laura Weieneth, Vince Lawson

8:15–8:30 AM

Biochar Added to a Potting Mix Decreased Bell
Pepper Transplant Size, While Increasing Nutrient
Retention

*Brandon Carpenter, Ajay Nair

8:30–8:45 AM

Trellising and Plastic Mulch Effects on Cucumber
Production in High Tunnels

*Ajay Nair, Moriah Bilenky, Nick Howell

8:45–9:00 AM

The Composition, More so than Yield, of Organic
Field-grown Tomato Fruit Is Affected by Grafting and
Rootstock

Natalie Bumgarner, David Francis, Bizhen Hu,
Jennifer Moyseenko, *Matthew D. Kleinhenz

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

Wednesday, July 24, 2013

9:00–9:15 AM

Commercial Extract from the Brown Seaweed *Ascophyllum nodosum* (Stimplex®) Improves Earliness and Yield of Hydroponically Grown Sweet Bell Peppers

*Will Neily, Jef Achenbach, Laurel Shishkov, Jeffrey Norrie

9:15–9:30 AM

Cauliflower Yield, Biomass Accumulation as Affected by Nitrogen Rates and Irrigation Scheduling

*Lincoln Zotarelli, Charles Barrett, Guilherme B. Buck, Simone da Costa Mello

8:00–10:00 AM

Desert Salon 9-10

Oral Session—Postharvest

Moderator: Jinwook Lee, Jinwook.Lee@ars.usda.gov

8:00–8:15 AM

Genetic and Environmental Variation in Southern Highbush Blueberry Flavor Components

*Jessica L. Gilbert, Michael L. Schwieterman, Thomas A. Colquhoun, David G. Clark, James W. Olmstead

8:15–8:30 AM

Efficacy of 1-Methylcyclopropene (1-MCP) in Purple Passion (*Passiflora edulis* Sims) Fruits as Affected by Dosage and Maturity Stage

*Jane Ambuko, Penina Mueni Yumbya, Margaret Jesang Hutchinson, Solomon Igosangwa Shibairo, Hiroshi Gemma, Willis Omondi Owino

8:30–8:45 AM

Starch Metabolism in Apple Fruit and Its Relationship with Maturation and Ripening

*Franziska C. Doerflinger, Christopher B. Watkins, William B. Miller

8:45–9:00 AM

Fumigation of 1-Hexylcyclopropene Inhibit Ethylene Production in Climacteric Fruits at Ambient Conditions

*Shamim A.K.U. Khan, Zora Singh, Alan Payne

9:00–9:15 AM

1-MCP Differentially Affects Postharvest Physiological Attributes and Incidence of Internal Browning in Cold Stored ‘Gala’ Apples

*Jinwook Lee, James Mattheis, David R. Rudell

9:15–9:30 AM

The Effects of ReTain, Harvista, and NAA on the

Quality of ‘Mcintosh’ Apples

*Christopher B. Watkins, Jacqueline F. Nock

9:30–9:45 AM

Diphenylamine and Conditioning Affect Disorders in Controlled Atmosphere (CA) Stored ‘Honeycrisp’ Apples

Christopher B. Watkins, *Jacqueline F. Nock

9:45–10:00 AM

Storage Temperature Affects Fruit Quality and Consumer Acceptability of ‘Fajri’ Mango

*Ahmad Sattar Khan, Aman Ullah Malik, Iftikhar Ahmad, Syed Ali Raza

8:00–10:00 AM

Directors Suite VI

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

Christopher S. Cramer, *Chair*

8:00–10:00 AM

Desert Salon 1-2

Oral Session—SCRI-MINDS Nursery Crops

Moderator: Paul Thomas, pathomas@uga.edu

8:00–8:15 AM

Development of an Advanced Sensor Network Node for Automated Monitoring and Control of Irrigation in Nursery and Greenhouse Production

George Kantor, David Kohanbash, Todd Martin, *John D. Lea-Cox

8:15–8:30 AM

Wireless Sensor Networks for Automated Irrigation Control in Container Nurseries: Implementation and Economic Impact

*Paul Thomas, Matthew Chappell, John M. Ruter, Erik Lichtenberg, Marc van Iersel

8:30–8:45 AM

Sensor-Controlled Irrigation Scheduling for Pot-in-Pot Nursery Tree Production

*Bruk E. Belayneh, John D. Lea-Cox

8:45–9:00 AM

The Implications of Minimum Stomatal Conductance on Estimating Water Flux in Containerized Tree Nurseries

*Dave M. Barnard, William L. Bauerle

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

Wednesday, July 24, 2013

9:00–9:15 AM

A Comparison of the Potential for Scaling Up Irrigation Scheduling Techniques: Substrate Moisture Sensing Versus Predictive Water Use Modeling

*Dave M. Barnard, William L. Bauerle

9:15–9:30 AM

Water, Irrigation Costs and the Benefits of Sensor Networks: Results from a National Survey of Ornamental Growers

*John Majsztrik, Erik Lichtenberg, Monica Saavedra, John D. Lea-Cox

9:30–9:45 AM

Behind the Curtain: The Support Component of Wireless Soil Moisture Networks

*Lauren Crawford, John D. Lea-Cox, John Majsztrik, William L. Bauerle, Marc van Iersel, Todd Martin, David Kohanbash

9:45–10:00 AM

Fertilizer Rate and Irrigation Duration Affect Leachate Volume, Electrical Conductivity, and Growth of *Gardenia jasminoides*

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

8:0–10:00 AM

Desert Salon 13-14

Workshop—I've Earned My Degree . . . What's Next?

Sponsor: Graduate Student Working Group

Coordinators: Kristin Abney, kabney22@gmail.com; Amanda Bayer, bayer10@uga.edu

The objectives of this workshop are to: learn about careers in land-grant and non-land-grant universities as postdocs, professors and research technicians; learn about careers with the USDA as postdocs and professors.

8:00–10:00 AM

Springs Salon D/E

Workshop—Sustainable Weed Management

Sponsors: Weed Control and Pest Management and Organic Horticulture Working Groups

Moderator: Teri Gadd, teri.gadd@colostate.edu

Coordinator: Teri Gadd, teri.gadd@colostate.edu

This workshop will offer interactive weed control research presentations that lessen or eliminate the need of herbicides and compare certified organic weed control to uncertified. Topics include: 1) certified organic and uncertified weed management

comparison; 2) weed seedbanks, mulches, cover crops, and soil fertility; and 3) physical and cultural weed control. Each topic will be followed by a short discussion period.

8:00–8:02 AM

Overview of Workshop Topics, Timing, and Speaker Introductions

8:02–8:15 AM

Do Certified and Uncertified Fresh-market Organic Tomato Farmers in the Midwest Manage Weeds Differently?

*Kevin D. Gibson, Jose M. Gomez Vargas, Ariana P. Torres Bravo

8:15–8:20 AM

Discussion of Topic 1: Certified Organic and Uncertified Weed

8:20–8:32 AM

Can Living Mulches Reduce Weed Seed Banks in Fresh Market Tomatoes?

*Kevin D. Gibson

8:32–8:51 AM

Cover Crops Influence Weed Management in Dry Edible Beans

Erin C. Taylor, *Karen A. Renner, Christy L. Sprague

8:51–9:00 AM

Discussion of Topic 2: Weed Seedbanks, Mulches, Cover Crops, and Soil

9:00–9:11 AM

Timing of Early Weed Control Practices by Growing Degree Days

Erin C. Taylor, *Karen A. Renner, Christy L. Sprague

9:11–9:31 AM

Physical Pest Control: Soil Disinfestation with Steam in Strawberry and Machine-vision Intra-row Cultivation in Vegetables

*Steven A. Fennimore

9:31–9:51 AM

Impact of Vineyard Floor Management Practices on Weed Communities and Soil Quality

*Richard F. Smith, Larry J. Bettiga, Michael Cahn

9:51–10:00 AM

Discussion of Topic 3: Physical and Cultural Weed Control

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

Wednesday, July 24, 2013

8:00 AM–12:00 PM

Springs Salon F

Colloquium—Strategy for Developing Mechanical Harvesting of Horticultural Crops: Simultaneous Short-, Medium-, and Long-Term Strategies

Sponsor: Production and Harvest Mechanization Working Group

Moderators: Rachel B. Elkins, rbelkins@ucdavis.edu; Stephanie Walker, swalker@nmsu.edu; Louise Ferguson, lferguson@ucdavis.edu

The objective of this colloquium is to delineate through successful examples the simultaneous steps of a successful mechanical harvesting development program from the harvesting technology through the extension program for adoption, including composition of the research team. The steps of developing a mechanical harvesting program will be presented as the short, medium and long-term goals and highlight the critical limiting factors of each.

8:00–8:30 AM

How Agricultural Engineers Develop Mechanical Harvesters: The University Perspective

*Sergio Castro-Garcia

8:30–8:45 AM

How Companies Select and Develop Harvesters: The Commercial Perspective

*Rachel B. Elkins

8:45–9:10 AM

Preparing Fresh Apple, Peach, and Pear Orchards for Mechanical Harvesting

*Terence Lee Robinson

9:10–9:35 AM

Transformation of an Ancient Crop: Preparing Oil and Table Olives for Mechanical Harvesting

*Louise Ferguson

9:35–10:00 AM

Chili Peppers: Challenges and Advances in Transitioning Harvesting of New Mexico's Signature Crop

*Stephanie Walker

10:00–10:25 AM

Grapevine Varieties, Trellis Systems, and Mechanization of the California Raisin Industry

*Matthew W. Fidelibus

10:25–10:50 AM

Progress in Breeding Highbush Blueberry Cultivars Adapted to Machine Harvest for the Fresh Market

*James W. Olmstead

10:50–11:15 AM

Breeding Oil and Table Olives for Mechanical Harvesting

*Luis Rallo

11:15–11:40 AM

Mechanization of Tasks in Horticultural Crops: The Labor Perspective

*Guadalupe Sandoval

8:15–9:45 AM

Starbucks at J.W Marriott Resort

Graduate Student Working Group Morning Gathering

Coordinator: Kristin Abney, kabney22@gmail.com

Why wait until the student events to meet the other graduate and undergraduate students at ASHS this year? Come by and meet them while you grab your morning cup of coffee (or tea).

8:30–10:00 AM

Director Suite III

Administrators Working Group Breakfast

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

8:30 AM–1:45 PM

Desert Ballroom: Salons 7-8

Poster Hall Open

8:30 AM–2:30 PM

Desert Ballroom: Salons 7-8

Exhibits Open

9:00–10:00 AM

Springs Salon C

International Horticulture and Issues (IHI) Working Group Business Meeting

Sarada Krishnan, *Chair*; Rich Pratt, *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.

9:00–11:00 AM

Desert Salon 3

Extension Division Advisory Council Meeting

Gary A. Bachman (Extension Division Vice President),

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

Wednesday, July 24, 2013

Chair; Jeanine M. Davis, (Past Extension Division Vice President); all Working Group Chairs and Chairs-elect, Extension Division

9:00 AM–12:00 PM

Tour Lobby

Coachella Valley Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

9:30 AM–12:15 PM

Springs Salon A/B

Scholars Ignite: Student Competition

Presiding: Anita Azarenko

ASHS is hosting the first annual competition called “Scholars Ignite” for graduate students to share their discoveries and creations to a non-specialist audience. Education VP Anita Azarenko is looking forward to making this new opportunity available to graduate students to communicate the impact of their research, projects and scholarly activities. Graduate students will make compelling presentations in three minutes using no more than one single PowerPoint slide or visual aid. The purpose of the presentation is to generate awareness, stimulate thought, and inspire attendees to appreciate the breadth and depth of horticulture research and scholarly activities. This is similar to the three- to five-minute thesis and research presentation events (e.g. Three minute thesis, Ignite, or Scholars’ Studio) occurring around the globe, and done especially well in Australia, British Columbia, and the University of Washington. Our hope is that this activity would stir the society’s membership up around graduate student learning, research, discovery, and creativity. ASHS would obtain “stories” to share via YouTube and for the web, and to brag about our graduate student membership and their accomplishments. Graduate students would meet other students, learn of research and other creative and scholarly activities across ASHS, and hopefully have fun! Winners will receive a cash award of \$500, \$250, and \$100 for the top three places, respectively. Students signed up for the competition at the time of registering for the ASHS conference.

9:45–10:15 AM

Desert Ballroom: Salons 7-8

Break

10:00–11:00 AM

Desert Salon 11

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.

10:00 AM–12:00 PM

Desert Salon 12

Certified Professional Horticulturist (CPH) Board Meeting

Terry Ferriss, *Chair*; Kerrie Badertscher; Mike Orzolek; John Abbott; Deborah Ellis; Gary Bachman

10:00 AM–12:00 PM

Directors Suite VI

Crucifer Crop Germplasm Committee

Presiding: Mark Farnham

10:00 AM–12:00 PM

Springs Salon C

Workshop—Waste Utilization in Horticulture Walking Tour of Related Posters

Sponsor: Waste Utilization in Horticulture Working Group

Moderator: William B. Evans, wbe1@ra.msstate.edu

Coordinators: William B. Evans, wbe1@ra.msstate.edu;

Joseph P. Albano, joseph.albano@ars.usda.gov

Please Meet in Springs C to gather with workshop participants. Group will then travel to the poster hall together.

The workshop will begin with a brief introduction, followed by an informal walk around the poster area to view work being done related to waste processing; waste recovery; composts and composting; substrates, containers, and fertilizers made from waste products; and other aspects of the role horticulture plays in finding uses for by-products and wastes.

10:15–11:45 AM

Desert Salon 4-6

Oral Session—Ornamentals/Landscape and Turf

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

10:15–10:30 AM

Research in Real Time: Integrating Social Media and Landscape Research

*Bert Cregg

10:30–10:45 AM

Genetic Characterization of Kyrgyzstan Fine-leaved *Festuca valesiaca* Germplasm for Use in Semi-arid, Low-maintenance Turf Applications

*Jack E. Staub, Yingmei Ma, Matthew D. Robbins, Paul G. Johnson, Steven R. Larson

10:45–11:00 AM

Easy Tea Hybrid Tea Rose Study: 2009–2012 Results

*Allen D. Owings

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Wednesday, July 24, 2013

- 11:00–11:15 AM
Characterization of *Erwinia amylovora* Strains Isolated from Ornamentals
*Kubilay Kurtulus Bastas
- 11:15–11:30 AM
New and Recently Introduced Bamboo Palms (*Chamaedorea*; *Arecaceae*) with Ornamental Potential
*Donald R. Hodel
- 11:30–11:45 AM
The Growth and Evaluation of Some Mexican Oaks and Other Trees in Los Angeles
*Donald R. Hodel, James E. Henrich, Ken Greby, Kerry A. Morris
-
- 10:15–11:45 AM Desert Salon 9-10
Oral Session—Pomology
Moderator: Carol A. Miles, milesc@wsu.edu
- 10:15–10:30 AM
Mechanical Harvest of Hard Cider Apples
*Carol A. Miles, Jonathan Roozen, Jacqueline King, Karen Hasenoehrl, David Bauermeister
- 10:30–10:45 AM
The Effect of Summer Hedging of Tall Spindle Apple Trees on Growth, Fruit Quality, and Flowering
*Terence Lee Robinson, Mario Miranda-Sazo, Stephen A. Hoying, Leonel Dominguez, Jose Fachinello
- 10:45–11:00 AM
Chemical Thinning of ‘Gala’ Apples with Treatments that Combine Sprays of NAA or BA during Flowering with Metamitron in Postbloom
*Gabino M. Reginato, Cristián Riquelme
- 11:00–11:15 AM
The Effect of Timing and Rate of Metamitron Sprays on Chemical Thinning of ‘Brookfield Gala’ Apple Trees
*Gabino M. Reginato, Cristián Riquelme
- 11:15–11:30 AM
Genotypic Variation in Apple Rootstock Cold Temperature Tolerance
*Rena Moran, Fang Geng, Gennaro Fazio, John A. Cline
- 11:30–11:45 AM
How Long Should Apple Rootstock Trials be Conducted?
*R.P. Marini

- 10:15 AM–12:15 PM Desert Salon 1-2
Oral Session—Genetics and Germplasm
Moderator: Nahla Bassil, Nahla.Bassil@ars.usda.gov
- 10:15–10:30 AM
Genetic Control of Resistance to Anthracnose Crown Rot of Strawberry in Florida and North Carolina
*Vance Whitaker, Luis F. Osorio, Jeremy Pattison
- 10:30–10:45 AM
A Single Gene Confers Resistance to Bacterial Leaf Spot in the Lettuce Cultivar La Brillante
*Ryan J. Hayes, Mark Trent, Carolee Bull
- 10:45–11:00 AM
Horticultural Trait-SNP Marker Association Study in a Collection of Lettuce (*Lactuca sativa* L.) Lines
*Jinguo Hu, Soon-Jae Kwon, Ivan Simko, Barbara Hellier, Beiquan Mou
- 11:00–11:15 AM
What Have We Learned during Marker-locus Trait Validation for *Rpfl* Red Stele Resistance in Strawberry?
Megan M. Mathey, Eric van de Weg, *Nahla Bassil, Andrew R. Jamieson, Chad E. Finn, Umesh Rosyara, James F. Hancock
- 11:15–11:30 AM
Characterization of Eight Novel Microsatellite Markers from *Viburnum rufidulum*
*Deborah Dean, Phillip A. Wadl, Denita Hadziabdic, Robert N. Trigiano
- 11:30–11:45 AM
Adaptive Differences Associated with Neutral and Non-neutral Markers in the Core Collection for North American Plums (*Prunus* spp.)
*Dario J. Chavez, Thomas G. Beckman, W.R. Okie, José Chaparro
- 11:45–12:00 PM
Molecular Markers for Population Studies of *Cornus sanguinea*
*Robert N. Trigiano, Phillip A. Wadl, Annie Hatmaker
- 12:00–12:15 PM
Population Structure Analysis of Eastern Filbert Blight Resistant Hazelnut (*Corylus* spp.) Germplasm
*Megan Muehlbauer, Thomas J. Molnar, Josh Honig, Jennifer Vaiciunas, John M. Capik

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Wednesday, July 24, 2013

10:15 AM–12:15 PM

Desert Salon 13-14

Workshop—Challenges and Opportunities of Operating a University Garden

Sponsor: Public Horticulture Working Group

Coordinator: Susan Wilson Hamilton, sueham@utk.edu

This workshop will share information and experiences regarding the challenges and opportunities of those responsible for the management and operations of university gardens.

10:15 AM–12:15 PM

Springs Salon D/E

Workshop—Organic Agriculture in Southern California: Producing Organic Products in the Low Desert

Sponsor: Organic Horticulture Working Group

Coordinators: Milton E. McGiffen, Jr., milt@ucr.edu;

Erin Silva, emsilva@wisc.edu

The Sonoran or Low Desert holds records for both high temperatures and high yields. It presents many unique challenges—extreme climate, low organic matter soils, and rapid breakdown of organic amendments. But it also presents many unique opportunities, including low water costs and a chance to supply uniquely profitable market niches. This workshop focuses on meeting both universal organic agricultural challenges in a challenging environment, and taking advantage of the unique situation the desert presents. Local growers, researchers, and extension personnel talk about working in the unique environment surrounding the site of this year's conference.

10:15–10:30 AM

Certified Organic Compost and Compost Tea Production and Use

*Abira Selvaraj

10:30–10:45 AM

Cost of Production Study for Organic Avocado

*Eta Takele

10:45–11:00 AM

Organic Date Production

*Vince Samons

11:00–11:15 AM

Organic Farming in the Imperial Valley

*Scott Howington

11:15–11:30 AM

Organic Vegetable Production in the Coachella Valley

*Jose Luis Aguiar

11:30–11:45 AM

Short- and Long-term Effects of Adding Organic Carbon to Low Organic Carbon Desert Soils

*Milton E. McGiffen, Jr.

11:00 AM–12:00 PM

Desert Salon 3

Industry Division Advisory Council Meeting

Jeffrey Norrie (Industry Division Vice President), *Chair*; Robert Mikkelsen (Industry Division Past President); all Working Group Chairs and Chairs-elect, Industry Division

11:00 AM–12:00 PM

Desert Salon 11

Working Group of Asian Horticulture (WGAH) Business Meeting

Jayesh Samtani, *Chair*; Mengmeng Gu, *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.

12:00–1:00 PM

Desert Salon 11

Association of Horticulturists of Indian Origin (AHIO) Business Meeting

Rammohan Uckoo, *Chair*

The Working Group's 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 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.

12:00–1:00 PM

Desert Salon 3

Intellectual Property Rights (IPR) Working Group Business Meeting

Amelie Aust, *Chair*; Todd P. West, *Chair-elect*; Tim Bourne, *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.

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Wednesday, July 24, 2013

12:00–1:00 PM

Desert Salon 4-6

Oral Session—Local Food Systems

Moderator: Mary E. Henry, mbhenry@ufl.edu

12:00–12:15 PM

Characterizing Polk Small Farms, as Compared to a Previous Florida Small Farms Survey

*Mary E. Henry, Glenn Israel

12:15–12:30 PM

The People's Garden Initiative: Case Studies on the Mississippi Gulf Coast

*Christine E. Coker, Gary R. Bachman, Corey Wheeler, Jeannine May, Beth D'Aquilla

12:30–12:45 PM

Global Sustainable Food Systems for Urban Environments

*Ajay Jha, Paul Rupp

12:45–1:00 PM

Designing in Systems: Using Engaged Design to Incorporate Permaculture Solutions

*Abbey E. Piner, Lucy K. Bradley, Will E. Hooker, Julieta T. Sherk

12:00–1:30 PM

Director Suite III

Pi Alpha Xi Luncheon and Annual Meeting

(Preregistration and prepayment required.)

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Crop Physiology

(305) Ethylene, Hypobaria, and Hypoxia: Influence on Plant Gas Exchange, Germination, Plant Growth, and Nutrition of Lettuce (*Lactuca sativa*) from Seed to Harvest

*Fred T. Davies, Chuanjiu He

(306) Physiological Response of Non-acclimated Spinach to Repeated Freeze–Thaw Cycles

*Dan Drost, Taunya Ernst

(307) Changes in Aliphatic Glucosinolates Synthesis during Early Seedling Growth and Insect Herbivory in Radish (*Raphanus sativus* L.)

Eun-Hye Gu, Sooyeon Lim, Byung-Ho Hwang, *Jongkee Kim

(308) Quantitative Analysis of the Major Aliphatic Glucosinolates in Doubled Haploid Lines of Radish Plants (*Raphanus sativus* L.) Obtained By Microspore Culture

NaRae Han, Si Un Kim, Sooyeon Lim, *Byung-Ho Hwang

(309) Comparison of Glucoraphasatin and Glucoraphenin Content from Radish Plant during Vegetative and Reproductive Growth

Si Un Kim, NaRae Han, Sooyeon Lim, *Byung-Ho Hwang

(310) Polyamines Alter Fruit Size and Shape By Regulating Cell Division and Expansion in Tomato

*Raheel Anwar, Shazia Fatima, Avtar K. Handa

(311) Glucosinolates Distribution during Growth and Development in Radish Plants

*Sooyeon Lim, Byung-Ho Hwang, Sang-Wook Han, Jongkee Kim

(312) Daily Light Integral Influences Production of Steviol Glycosides

*Jennifer Evans, Veronica Vallejo, Ryan M. Warner

(313) The Influence of Temperature, Amino Acid, and Polyamine on Pollen Germination of Pepper (*Capsicum annum* L.)

*Jeongmin Suh, Jumsoon Kang, Younghoon Park, Jae-Hwan Cho, Chang-Ho Hong, Hyun-Moo Shin

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Environmental Stress Physiology

(236) Carbon Gain, Biomass Allocation, and Water Use by Garlic in Response to Elevated CO₂ and Nitrogen Availability

Lloyd Nackley, Jighan Jeong, *Soo-Hyung Kim

(237) The Effects of Fog Moisture Treatment on Reduction of Water Core Occurrence in Apple

*Sung-Hee Lee, Ikjei Kim, Yeu Seok Kwon, Ki Youl Lee

(238) The Effect of Water Stress on Leaf Aquaporin Expression in Sweet Orange Trees

Maria Benlloch-Gonzalez, *Ayako Kusakabe, Hilda S. del Rio, Eliezer Louzada, Juan Carlos Melgar

(239) Sound Practices to Effectively Perform Electrolyte Leakage Assays

*Ayako Kusakabe, Juan Carlos Melgar

(240) Interactive Effects of Hypoxia and Salinity on Perennial Ryegrass and Alkaligrass

*Hanan Isweiri, Yaling Qian

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

Wednesday, July 24, 2013

(241) Varietal Differences in Physiology of Drought Stressed *Phaseolus*

Jesse Traub, James D. Kelly, *Wayne H. Loescher

(242) Initial Evaluation of Lettuce Collections for Drought Tolerance

*Caleb Knepper, Beiquan Mou

(243) Remotely Surface Reflectance Data for Irrigation Scheduling of Southern New Mexico Pecan Orchards

*Yahia Othman, Caiti Steele, Rolston St. Hilaire

(244) Using Sap Flow, Stem Diameter Micro-variations to Assess Water Use in Grapefruit Trees under Water-saving Irrigation Strategies

Sheren Elsayed Farag, *Juan Carlos Melgar

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Floriculture

(017) Temperature Affects the Development of Brown Spots on the Leaves of *Oncidium* Sharry Baby

Hye-Ji Kim, *Min Hee Kim, Xinxin Li, Kenneth Leonhardt

(018) Evaluation of *Oncidium* Intergenerics as Potential Cut Flowers

*Min Hee Kim, Kenneth Leonhardt, Hye-Ji Kim

(019) Biocontainer Use in *Petunia ×hybrida* Greenhouse Production—A Cradle-to-Gate Carbon Footprint Assessment of Secondary Impacts

Robin Brumfield, *Andrew Koeser, Sarah T. Lovell, J. Ryan Stewart

(020) Bluing of Hydrangea ‘Endless Summer’ Sepals Is Influenced by Timing of Aluminum Sulfate Drenches or Aluminum Chelate Foliar Sprays in Three Different Locations and Production Systems

*James S. Owen, Jr., Kimberly A. Williams, Heather M. Stoven, Joshua Craver, Julie Brindley

(021) Water Use and Cold Hardiness of English Lavender

Shuyang Zhen, *Stephanie Burnett

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Fruit Breeding

(357) Application of Simple Sequence Repeat

Markers for Fruit Soluble Solids Content and Titratable Acidity in the Arkansas Peach and Nectarine Breeding Program

*Alejandra A. Salgado, John R. Clark, Paul Sandefur, Ksenija Gasic, Cameron Peace, Nahla V. Bassil

(358) Application of a Standardized Protocol for Fruit Quality Phenotyping in the Arkansas Peach and Nectarine Breeding Program

*Alejandra A. Salgado, John R. Clark, Paul Sandefur, Ksenija Gasic, Cameron Peace, Nahla V. Bassil

(359) RosBREED: Functional Allele Distribution for Blush Development in U.S. Peach Breeding Germplasm

Terrence Frett, *Ksenija Gasic, John R. Clark, Alejandra A. Salgado, Thomas Gradziel, Jonathan Fresnedo, David H. Byrne, Natalie Anderson, Tim Hartman, Cameron Peace, Paul Sandefur, W.R. Okie, Gregory L. Reighard, Travis Stegmeir, Umesh Rosyara, Amy F. Iezzoni

(360) Application of Whole Genome Sequencing and High Resolution Mapping to Characterize Brown Rot (*Monilinia* spp.) Resistance in Peach [*Prunus persica* (L.) Batsch]

Pedro J. Martinez-Garcia, Jonathan Fresnedo, *Dan Parfitt, Thomas Gradziel, Richard M. Bostock, Joseph Fass, Dawei Lin, Ebenezer A. Oguniwin, Helen M. Chan, Riaz Ahmad, Carlos H. Crisosto

(361) Comprehensive Assessment on Quality of Fresh-eating Jujube Cultivars

Deyi Yuan, Wen-tao Chen, Riqing Zhang, *Donglin Zhang, Zhi-qiang Han, Hong-xu Long

(362) Phenotypic Diversity of Individual Sugars, Soluble Solids Content, and Acidity in Rosbreed Apple Germplasm

*Yingzhu Guan, Cari Schmitz, Matthew Clark, Benjamin Orcheski, James Luby, Susan K. Brown, Cameron Peace, David R. Rudell, Katherine Evans

(363) S₂ Progeny of Japanese Pear (*Pyrus pyrifolia* Nakai) ‘Osa Nijisseiki’ Having Self-compatibility and Their Homozygosity Estimated By SSR Analysis

*Eiichi Inoue

(416) Novel Carotenoid Pathway-related Gene Expression Patterns in Citrus Leaves and Maturing Fruits

*Xu Wei, Qibin Yu, Chunxian Chen, Antoine Gady, Yuan Yu, Fred Gmitter, Guolu Liang

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

Wednesday, July 24, 2013

12:15–1:00 PM Desert Ballroom: Salons 7-8

Graduate Student Poster Competition— Session 5

Sign up at the time of abstract submission was required.

Full competition schedule begins on p. 16.

12:15–1:00 PM Desert Ballroom: Salons 7-8

Poster Session—Growth Regulators in Fruit and Nut Production

(276) The Use of ABA and AVG to Manage Fruit Set and Cropload of European Pear

*Todd Einhorn, Mateus Da Silveira Pasa

(277) Transplant Height Control and “Transplant Shock” Reduction with S-Abscisic Acid (S-ABA) in Vegetable Production

Frederick Marmor, Craig A. Campbell, Paul Silverman, Derek D. Woolard, Liu Xiaozhong, Peter D. Petracek,

*Rob Fritts, Daniel Leep, Gregory Venburg,

Johan Pienaar, Jozsef Racsko

(278) Physiological Investigations of Chemical Thinner Efficacy in Apples

P. Francescatto, *Diane Doud Miller, Jozsef Racsko

12:15–1:00 PM Desert Ballroom: Salons 7-8

Poster Session—Plant Nutrient Management

(266) Buffering Capacity of Substrates with Varying Amounts of Compost and Limestone

*Rachel A. Kreis, Matthew D. Taylor

(267) The Hydration Efficiency of Two Pine Tree Substrate Components under Dry Conditions

Jeb S. Fields, William C. Fonteno, *Brian Jackson

(268) Processing Tomato Response to Nitrogen Fertilizer

*Elizabeth T. Maynard

(269) The Ability of *Plectranthus parviflorus* and *P. ambiguus* to Regreen after Micronutrient Deficiency

*Christopher Borman, Ellen T. Paporozzi,

M. Elizabeth Conley

(270) Urea Hydrolysis in Pine Tree Substrate Is Affected by Urea and Lime Rate

*Alexander X. Niemiera, Linda L. Taylor,

Jacob H. Shreckhise

(271) Content of Nitrogen, Phosphorus, and Potassium in Oregano (*Origanum vulgare* L.) Cultivated in Substrate

*C.R. Juarez-Rosete, J.A. Aguilar-Castillo,

R. Bugarin-Montoya, M.E. Juarez-Rosete

(272) The Effect of Osmotic Potential of Nutrient Solution on the Yield of Hungarian Wax Pepper (*Capsicum annuum* L.)

*Porfirio Juarez-Lopez, Ruben Bugarin-Montoya,

E. Cruz-Crespo, Cecilia R. Juarez-Rosete,

J. Diego García-Paredes, Rosendo Balois-Morales,

Gelacio Alejo-Santiago, Fredi I. Salazar-Jara

(273) The Effect of Osmotic Potential of Nutrient Solution on the Yield of Yellow Pepper (*Capsicum annuum* L.)

*Porfirio Juarez-Lopez, Fredi I. Salazar-Jara,

Gelacio Alejo-Santiago, Ruben Bugarin-Montoya,

J. Diego García-Paredes

(274) Mature Prune Trees in a Commercial Orchard Did Not Absorb a Measurable Amount of Potassium Analog Applied to the Soil Beneath an Adjacent Tree

*Franz Niederholzer

(275) The Effect of Foliar-applied Acidified Iron Sulfate on Chlorophyll and Iron Contents in Leaves of ‘Chandler’ Walnut Trees

Sergio Sanhueza, Pilar M. Gil, *Bruce Schaffer,

Manuel Araya

12:15–1:00 PM Desert Ballroom: Salons 7-8

Poster Session—Pomology

(096) Unique Fruit Development of Ornamental ‘Teapot’ Jujube

*Shengrui Yao

(097) Searching for the Next Pawpaw Cultivar: Unique Germplasm Selections At Kentucky State University

*Kirk William Pomper, Sheri B. Crabtree, Jeremiah Lowe

(098) Field Establishment and Vigor of Kentucky State University Pawpaw Advanced Selections

*Sheri B. Crabtree, Kirk William Pomper, Jeremiah Lowe,

Brandon May

(099) Inflorescence Traits and Pollen Germination Characteristics of *Castanea henryi*

Xiao-ming Fan, Deyi Yuan, Jing Tang, Feixiang Yang,

Wei Gao, Ya Yang, Donglin Zhang, *Hongxu Long

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Wednesday, July 24, 2013

(100) The National Strawberry Sustainability Initiative

*Curt R. Rom, Heather Friedrich, Luke Freeman,
Marty Matlock, Jennie H. Popp, Ronald L. Rainey

(101) Pomegranate Variety Trial in Southern Arizona

Ursula K. Schuch, *Tilak Mahato, Glenn Wright

(102) Regulation of Floral Induction in Apple

*Mokhles A. ELsyy, Peter M. Hirst

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Postharvest

(400) Cultivar Differences in Gaseous
1-Methylcyclopropene Accumulation in Whole and
Fresh-cut Apple Fruit

Xiaoqing Dong, Donald J. Huber,
*Maricruz Ramirez-Sanchez, Jing-Ping Rao, Jinsu Lee,
Christopher B. Watkins

(401) Quality of Fresh-cut Pineapple Cubes Treated by
Either High Pressure or Thermally Blanching

*Hidemi Izumi, Megumi Ishimaru, Hiroshi Matsuo

(402) Evaluation of Quality and Sensory Attributes of
Purple Passion Fruit (*Passiflora edulis* Sims) Harvested
at Different Stages of Maturity

*Jane Ambuko, Penina Mueni Yumbya,
Willis Omondi Owino

(403) Study of the Application of Technological
Alternatives to Increase the Shelf Life of Mango
(*Mangifera indica* L.) Cv. Manila

Dalia Vázquez-Celestino, Rosalía Reynoso-Camacho,
Eduardo Castaño-Tostado, Ma Estela Vázquez-Barrios,
*Edmundo Mercado-Silva

(404) Harvest Timing, Crop Load, and Preharvest GA₃
Application Affect Postharvest Quality of ‘Lapins’ and
‘Sweetheart’ Sweet Cherries

*Yan Wang, Todd Einhorn

(405) Grafting Rootstock, Scion, and Field Holding
Effects on Seedless Watermelon Fruit Quality

*Penelope Perkins-Veazie, Richard L. Hassell

(406) Effects of Postharvest Heat Treatments on
Chilling Injury, Diseases, and Quality of Tuscan
Melons

*Christian Krarup, Cristian Jacob, Samuel Contreras

(407) Effect of Harvest Delay of Southern Highbush
Blueberry on Resistance to Impact and Storage
Quality

*Steven Sargent, Jeffrey G. Williamson,
Adrian D. Berry, James W. Olmstead

(408) Extending Cassava Root Market Life in Liberia
with Improved Postharvest Practices

*David H. Picha

(409) Market Life Extension and Fruit Quality
Enhancement of Navel Oranges

*David H. Picha, Mary S. Bowen

(410) Suitability of Two Instruments to Determine
Skinning Resistance in Sweetpotato

*Xiang Wang, Ramon A. Arancibia, Jeffrey L. Main,
Lori Grelen, Don LaBonte

(411) Postharvest Storage Affects Sweetpotato Water-
soluble Vitamin Composition

*Wilmer Barrera, David H. Picha

(412) Differences in Storage Quality of Onion Bulb as
Affected By Harvesting Methods

*Injong Ha, Sunkyoung Hwang, Jongtae Lee,
Sunyoung Lee, Jinseong Moon, Byeonggyu Min,
Heedae Kim

(413) Application of Two Different MAP Systems in
Order to Prolong the Shelf Life of Romaine Lettuce
during Marine Shipment

*Eleni D. Pliakoni, Donald J. Huber, Steven Sargent,
Jeffrey K. Brecht

(414) Essential Oils in the Conservation of ‘Palmer’
Mango Fruits

*Gisele Polete Mizobutsi, Gisele Mizobutsi,
Raquel Rodrigues Soares Sobral,
Rayane Carneiro dos Santos, Martielle Batista Fernandes,
Lais Maia e Silva, Daffine Oliveira Santos,
Wagner Vendrame, Edson Hiydu Mizobutsi

(415) Essential Oils in the Management of Anthracnose
in Postharvest of ‘Palmer’ Mango Fruits

*Edson Hiydu Mizobutsi,
Raquel Rodrigues Soares Sobral,
Rayane Carneiro dos Santos, Martielle Batista Fernandes,
Lais Maia e Silva, Daffine Oliveira Santos,
Gisele Polete Mizobutsi, Gisele Mizobutsi,
Wagner Vendrame

12:15–1:00 PM

Desert Ballroom: Salons 7-8

Poster Session—Viticulture and Small Fruits

(121) Muscadine Grapes: Evaluation of Genotypes and
Field Fungicide Applications on Postharvest Storage
Attributes

*Derek W. Barchenger, John R. Clark, Renee T. Threlfall

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Wednesday, July 24, 2013

(122) Failure Tests of Intact Grape Berry Skins and What They Tell Us About Berry Cracking

*Yan Zhuang, Mark Matthews, Kenneth Shackel

(123) Determining Survival of *Lobesia botrana* Larvae in Grapes Processed for Wine Making to Evaluate the Risk of Dispersal

*Rhonda J. Smith, Monica L. Cooper, Lucia G. Varela, Gregory S. Simmons

(124) Utilizing Pruning and Leaf Removal to Ripen Grapes and Encourage Cold Tolerance in North Dakota

Andrew D. Aipperspach, Harlene Hatterman-Valenti, *Brittany K. Olson

(125) Applying Precision Agriculture Technologies as a Problem Solving Tool to Improve Small-scale Vineyard Management in Western Nile Delta of Egypt

*Diaa O. EL-Ansary

(126) Flavonoid Accumulation in Wine Grapes

*Ashlyn E. Wedde

(127) Evaluation of Two Sources of Organic Matter Applied to Soil and Their Effects on Grape Production

Fabian Robles-Contreras, Manuel de Jesús Valenzuela-Ruiz, Ruben Macias-Duarte, *Raul L. Grijalva-Contreras, Arturo López-Carvajal

12:30–1:30 PM

Desert Salon 1-2

Workshop—International Consultation, Outreach, and Capacity Building

Sponsors: International Horticultural Consultants, International Horticulture and Issues, Postharvest Working Groups, and the Working Group of Asian Horticulture

Coordinators: Mary E. Henry, mbhenry@ufl.edu; David Obenland, david.obenland@ars.usda.gov

This workshop will inform participants on strategies to craft a career with potential to translate into international work in the future. Updates on current USAID projects, as well as those funded by other sources, including volunteer assignments will be offered. Participants will benefit from honest discussion of in-country experience and learn how they can get involved in international employment and consultation opportunities.

12:30–12:45 PM

Farmer-to-Farmer Volunteer Opportunities: University Lectures and Labs in Tajikistan with CNFA

*John L. Griffis, Jr.

12:45–1:00 PM

Career Opportunities at USAID

*John E. Bowman

1:00–1:45 PM

Study Abroad/International Field Trips to Increase Students' and Agriculture Professionals' Competitiveness in the International Arena

Mengmeng Gu, James A. Robbins, Xin Zhao

1:15–1:30 PM

Hort CRSP Update

Beth Mitcham

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Graduate Student Poster Competition—Session 6

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Herbs, Spices, and Medicinal Plants

(176) An Efficient Protocol for Direct Somatic Embryogenesis in Medicinal Tree *Murraya Koenigii* (L.)

Nisha Khatik, *Ramesh Joshi, M.L. Agarwal, Dilip Nandwani

(177) Photosynthesis and Harvest of Deltoid *Synurus* (*Synurus delitodes*) under Three Different Light Environments

*Heesun Noh, Kyeongcheol Lee, Jonghwan Kim, Hangsup Han

(178) Anti-inflammatory Activity of *Potentilla kleiniana* Extracts

*Jung-Hwan Nam, O.S. Hur, Su-Young Hong, Su Jeong Kim, Hee-Jhun Park, Kyung-Tea Lee, Oh-Keun Kwon, Kwang-Soo Cho, Hwang-Bae Sohn, Ki Sun Kim

(179) Phenolic Content and Antioxidant Capacity of American Persimmon Teas

*Hideka Kobayashi, George Anotnious, Changzheng Wang, Kirk William Pomper

(180) The Effect of Composts on Field Soils Affected by Bacterial Wilt of Edible Ginger in Hawaii

*Sharon Motomura, Scot Nelson, Susan C. Miyasaka, Michael Shintaku

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Organic Horticulture

(082) Groundcover Management System and Nutrient Source Impact Physical Soil Quality

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

Wednesday, July 24, 2013

Indicators in an Organically Managed Apple Orchard

Neal Mays, *Curt R. Rom, M. Elena Garcia, Mary Savin, Kristofer Brye, Jason McAfee, Heather Friedrich

(083) Cover Crop Mixtures Build Soil Quality in Organic Hop Orchards

*Lori Hoagland, Kevin Murphy, Sam Turner, Robert Serrine

(084) An Evaluation of Organic Fertilizers for Use in Container Media

*A. James Downer, Anna D. Howell

(085) Effect of Late Summer Cover Crops on Weed Management in Organic Vegetables in the Great Lakes Region

*Thomas Björkman, Joseph W. Shail, Jr., Daniel C. Brainard, Carolyn Lowry, John B. Masiunas, Dan Anderson

(086) Nutrient Content of Field-grown Organic Heirloom Tomatoes as Influenced by Poultry Compost and Mycorrhizae Application

Lurline E. Marsh, *Fawzy M. Hashem, Brett D. Smith, Corrie P. Cotton

(087) Organic Production of Sunflowers in High Tunnels

*Guihong Bi, William B. Evans, Vasile Cerven

(088) Vegetable Yield and Soil Quality as Affected by Organic Cropping Systems

*Xin Zhao, Kathleen Delate, Cynthia Cambardella

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Ornamental Plant Breeding

(376) In Vitro Chromosome Doubling of *Prunus laurocerasus* ‘Otto Luyken’

*Ryan Contreras, Luigi Meneghelli

(377) Breeding Heat Tolerant Abutilon

Fanghua Niu, *Donglin Zhang, John M. Ruter, Zhihui Li

(378) Characterizing Crop Timing and Quality Traits of a *Petunia integrifolia* × *P. axillaris* Recombinant Inbred Line Population under Different Temperatures

*Wei-Kuang Lin, Ryan M. Warner

(379) Ploidy Analysis of Cultivated *Corylopsis* (Hamamelidaceae)

Richard T. Olsen, *Margaret Pooler

(380) In Vitro Callus Induction of *Dendranthema indicum* var. *Aromaticum*, a Scented Chrysanthemum

*He Miao, Feng Bo, Dong Chunyan, Qixiang Zhang, Neil O. Anderson

(381) Variation in Nuclear DNA Content and Chromosome Number among and within *Caladium* Species

Zhe Cao, *Zhanao Deng, Mike McLaughlin

(382) Haploid Production through Anther Culture in *Saintpaulia* Species

*Yuichi Uno, Haruyuki Kobayashi, Hitomi Koda

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Teaching Methods

(184) Development of Teaching Aid for Leaf Function and Evaluation of Its Impacts on Student Academic Achievement

*Ji-Hye Moon, Sun Jin Jeong, Sang Mi Lee

(185) Do Plants Play a Part in Student Satisfaction?

*Amanda Plante, J. Mark Fly, Susan Wilson Hamilton

(186) A Webinar Series to Provide Advanced Training for Iowa Nursery and Landscape Professionals

*Ann Marie VanDerZanden

(187) An Undergraduate Independent Study Project Developing a Golf Course Tree Inventory for Audubon Sanctuary Certification

*David Kopsell, Jacob Kuban, Mike Rayman

(188) Introducing the Flipped Classroom in Several Horticulture Courses

*Kent D. Kobayashi, Kauahi Perez

(189) Fruit Quality Measurements in a Segregating Blueberry Population: Plant Breeding Training for Undergraduates

*Rachel A. Itle, Catherine Cellon, Kyle M. Guerrero, Micah J. Weiss, William Cobb, Giovanni E. Covarrubias, Werner R. Collante, James W. Olmstead

(190) Understanding Student Perceptions and Industry Expectations for Viticulture and Enology Careers

*Patricia A. Skinkis, Sierra Laverty, James Osborne

(191) The Use of Creative Nonfiction in a Floriculture Production Course to Introduce Concepts of Plant Conservation, Industry Internationalism, and Consumer Motivations for Plant Purchases

*Kimberly A. Williams

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Wednesday, July 24, 2013

(192) How To: Making an Informative Video from Start to Finish

*Rosa Bevington, Sadhana Ravishankar, Kurt D. Nolte

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Temperate Tree Nut Crops

(128) A Reduced Early Season Irrigation Schedule for Southeastern Pecan Production

*Lenny Wells

(129) Efficiency of California Trunk Shaking Pistachio Harvesters

*Louise Ferguson, John A. Miles, Sergio Castro-Garcia, Kitren Glozer

(130) Feeding Preference of *Conotrachelus retentus* on Black Walnut Tissues

*Michele R. Warmund, Audrey L. Davis, Terrell Stamps

(131) Characterization of the Relationship of Manganese Nutrition to Photosynthesis of Pecan in the Mesilla Valley, New Mexico

*Joshua Sherman, Richard Heerema, Rolston St. Hilaire, Dawn VanLeeuwen

(132) Investigating Physiology of Salt Processing in Pistachio

*Jessie M Godfrey, Maciej Zwieniecki, Georgia Drakakaki, Louise Ferguson

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Vegetable Crops Management

(160) Symbiotic Performance of Diverse Cowpea Genotypes on the Delmarva Peninsula

*Nadine M. Burton, Fawzy M. Hashem, Robert B. Dadson, Corrie P. Cotton

(161) Grafting and Number of Polyplastic Film Layers Affect Yield of High Tunnel Tomatoes

*Sanjun Gu, Catherine Bohnert, Steven Kirk

(162) Effects of Grafting and Landscape Fabric on Productivity of Three Organically Grown Heirloom Tomato Varieties in High Tunnels

Kurt Taylor, Grace Summers, Patricia Perez, *Sanjun Gu, Rickie Holness

(163) Low Tunnels and Shading Influence Total and Marketable Yield of Bell Pepper Fruit

*Samuel Day, Dan Drost

(164) Evaluating Extended Season Head Lettuce Production in West Virginia

*Lewis Jett

(165) Fruit Yield and Composition as Functions of Grafting and Irrigation Regimen in an Organic High Tunnel System

*Matthew D. Kleinhenz, David Francis

(166) Production and Quality of Grafted Watermelon Cultivars

*Samuel Contreras, Cristian Jacob, Christian Krarup

(167) Influence of Grafting and Planting Density on Fruit Yield and Root-knot Nematode Control in Tomato Production

*Ruhiiyyih Dyrdaahl-Young, Xin Zhao, Stephen M. Olson, Robert McSorley

1:00–1:45 PM

Desert Ballroom: Salons 7-8

Poster Session—Water Utilization and Management

(255) Influence of Nitrogen Rate and Drip Application Method on Pomegranate Fruit Yield and Quality

*Donald J. Makus, R.C. Phene, C.J. Phene, R. Schoneman, James E. Ayars

(256) Container-grown Lavender Affected by Oxygenated Irrigation Water

S. Evan Wilson, *Diana Cochran, Amy Fulcher

(257) Response of Mexican Lime to Partial Rootzone-drying: A Water-saving Strategy

*Beatriz A. Contreras-Barragan, Ayako Kusakabe, Juan Carlos Melgar

(258) Strategies for Reduction of Irrigation Applications for Bare-root Strawberry Transplant Establishment in Central Florida

*Craig Stanley, Bielinski M. Santos

(259) Sensor Integrated Automatic Irrigation System to Reduce Runoff and Nutrient Loss without Affecting Plant Growth

*Xueni Wang, Rodney Thomas Fernandez, Bert Cregg, Mathieu Ngouajio, Rafael Auras, Joseph P. Albano

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Wednesday, July 24, 2013

(260) Seasonal Water Use of Southern Highbush Blueberry in Florida

*Jeffrey G. Williamson, Luis E. Mejia, Bradley Ferguson

(261) Identification of Plant-endophytic Bacteria from Bell Pepper (*Capsicum annuum* L.) Grown under Different Production Systems and Water Regimes

*Zheng Wang, Timothy W. Coolong

(262) Comparing Hydraulic Properties of Soilless Substrates with Natural Soils: A More Detailed Look at Hydraulic Properties and Their Impact on Plant Water Availability

Leonardo D Rivera, *Lauren Crawford, Marc van Iersel, Sue Dove

(263) Seasonal Landscape Crop Coefficients

*Tim Pannkuk

(264) Containment, Remediation, and Recycling of Irrigation Water for Sustainable Ornamental Crop Production: Results of a SCRI Planning Grant

*Sarah A. White, James S. Owen, Jr., John Majsztrik, Rodney Thomas Fernandez, Paul R. Fisher, Charles R. Hall, Tracy A. Irani, John D. Lea-Cox, Julie Newman, Lorence R. Oki

(265) Use of Rainfall Simulation to Determine the Persistence and Transport of *Escherichia coli* and Salmonella in Runoff Water

*Tamadour N. Khairi, Fawzy M. Hashem, Corrie P. Cotton, Robert Korir, Leonard C. Kibet, Arthur Allen, Ray Bryant, Patricia Millner

1:00–2:00 PM

Springs Salon C

Local Food Systems (LOCSY) Working Group Business Meeting

Christine Coker, *Chair*; Kathryn Fortenot *Chair-elect*; Rebecca N. Brown, *Secretary*

The LOCSY 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.

1:00–2:00 PM

Desert Salon 11

Production and Harvest Mechanization (MECH) Working Group Business Meeting

Stephanie 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.

1:00–3:00 PM

Springs Salon A/B

Workshop—Fantastic Fruits Grown in California

Sponsor: American Pomological Society

Moderator: Michele R. Warmund, warmundm@missouri.edu

Coordinator: Michele R. Warmund, warmundm@missouri.edu

To present current knowledge of three exotic California-grown fruit crops. This workshop features three of California's fascinating fruit crops, including figs, persimmon, and pitahaya. Figs were purportedly introduced into California in 1759 by Franciscan missionaries. Production of this crop increased steadily over the years and peaked in 1943. While fig acreage has declined, California currently ranks third in world production. Japanese and Chinese persimmons were introduced into the United States in the mid-1800s and are primarily grown in the San Joaquin valley and in southern California today. In the 1990s, adventurous producers started growing pitahaya or dragon fruit, which can be found in local markets. Each of these exotic fruits has production opportunities and challenges in a changing environment.

1:00–1:55 PM

Figs: An Old California Industry in Transition

*Louise Ferguson, Ed Stover, Carlos H. Crisosto, John Preece

1:55–2:25 PM

Pitahaya Cultivars and Their Production Potential in Southern California

*Ramiro Lobo

2:25–2:55 PM

Persimmon Diversity and Cultivar Status

*Dan Parfitt

1:30–2:00 PM

Desert Salon 3

Horticulture Hall of Fame Selection Committee

Paul E. Read, *Chair*; Mary M. Peet; John R. Clark; Cary A. Mitchell; William J. Lamont, Jr.; Fred T. Davies; Kelly Young; Paul Bosland; Mary Lewnes Albrecht

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

Wednesday, July 24, 2013

1:45–3:30 PM

Desert Ballroom: Salons 7-8

Poster Removal

All posters are to remain up until the last poster session has ended.

The removal can begin at 1:45 PM on Wednesday. Any posters that are still in the hall after 3:30 PM will be removed by the general contractor. ASHS cannot accept responsibility for loss or damage to any posters that are not removed at the scheduled removal period.

1:45–3:45 PM

Springs Salon D/E

Workshop—A Speed Dating Approach to Career Options

Sponsor: Industry Division

Moderators: Kristin Abney, kabney22@gmail.com;
Jeffrey Norrie, jnorrie@acadian.ca

Students are increasingly looking at options other than university or government positions when exploring career paths. Industry is one of the most important potential avenues for these alternative choices. This workshop is designed to expose students to the requirements and responsibilities of several Industry scientists in a fun and fast-paced way. Scientists from several horticultural companies will deliver a brief description of their education, past experience, current responsibilities and advice for students looking at career options, with emphasis on how their education has supported their career path. Students will have time afterward to mingle and discuss career ideas with the speakers, and carry on the discussion poolside in the evening.

1:45–3:45 PM

Desert Salon 9-10

Workshop—Current Techniques for Nondestructive Quality Evaluation of Postharvest Horticultural Commodities

Sponsor: Postharvest Working Group

Coordinator: David Obenland, david.obenland@ars.usda.gov

To discuss the current state of evaluating horticultural quality parameters by nondestructive sensing techniques for use in laboratory and commercial settings following harvest.

1:45–2:00 PM

Rapid Agricultural Product Quality Measurements using Magnetic Resonance Based Sensors

*Michael McCarthy

2:00–2:15 PM

The Use of X-ray Imaging Technology for Nondestructive Inspection of Horticultural Crops for Defects and Contaminants

*Ronald Haff

2:15–2:30 PM

Use of Electronic Nose for Evaluation of Fruit Harvest Maturity, Variety, and Quality

*Elizabeth Baldwin

2:30–2:45 PM

Real Time Inspection of Agricultural Products with NIR

*Thomas Pearson

2:45–3:00 PM

Using Chlorophyll Fluorescence for the Rapid, Nondestructive Assessment of Fruit Quality

*Jun Song

3:00–3:15 PM

An Industry Perspective on Nondestructive Testing of Horticultural Commodities

*Ken Moynihan

1:45–3:45 PM

Desert Salon 13-14

Workshop—Horticultural Substrates: Current Research, Development, and Characterization for Improved Crop Production

Sponsor: Nursery Crops Working Group

Moderator: Cheryl R. Boyer, crboyer@k-state.edu

Coordinators: John Majsztrik, jcmajsz@umd.edu;
Brian Jackson, brian_jackson@ncsu.edu; Sarah A. White, swhite4@clemson.edu

This workshop will provide an update on the status of alternative nursery crop substrate research in the United States and to share new techniques for substrate analysis.

1:45–2:05 PM

Introduction and Overview of Current Issues and Advances in Traditional and Alternative Substrate Manufacturing and Utilization

*Brian Jackson

2:05–2:30 PM

Proper Statistical Methods for Analyzing Substrate Mixtures

*James Altland

2:30–2:55 PM

Irrigating Substrates to Improve Nutrient Retention and Plant Growth

*Rodney Thomas Fernandez

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

Wednesday, July 24, 2013

2:55–3:20 PM

Root Growth of Container Crops: Techniques for Enhancing and Measurement

*Brian Jackson

3:20–3:45 PM

Methods for Analysis of Soilless Substrate Physical and Hydraulic Properties

*James S. Owen, Jr.

1:45–3:45 PM

Desert Salon 4-6

Workshop—Intellectual Property Fundamentals and Current Issues

Sponsor: Intellectual Property Rights Working Group

Moderators: Amelie Aust, ameliea@fallcreeknursery.com; John R. Clark, jrclark@uark.edu

Coordinators: Timothy F. Bourne, timbourne@sunviewvineyards.com; Larry D. Knerr, lknerr@shamrockseed.com; Todd P. West, todd.p.west@ndsu.edu

The IPR workshop will act as a resource for ASHS members on the domestic intellectual property landscape, including both prepared speeches and a panel for questions. The presentations will present an overview of the various types of Intellectual Property rights and their application in horticulture and agriculture, and how they can be used. In addition, we will address current events relevant to horticulture, specifically addressing new laws and legal precedents that you should be aware of. A panel of speakers will include a variety of perspectives, including Researchers, Intellectual Property Attorneys, and Industry Experts. In the first hour, panel speakers will provide an overview of the types of intellectual property protection beyond Plant Patents and Plant Breeder's Rights Certificates. These rights include Trademarks, Trade Secrets, Utility Patents, and Copyrights, all of which can be utilized to maximize your intellectual property benefits. This information will serve as the foundation material for the panel speakers to build upon during the second hour.

Topics:

IP Basics—Domestic Focus

Chelle Bos, Plant Patent Attorney

Current Events—Changes in the Patent Law, Legal Precedent, and What It Means to the Horticulture Community

Robert Jondle, Plant Patent Attorney

Breeding—The Future Role of Public versus Private IP in Horticulture

(speaker to be announced)

The moderated panel presentation for the second hour will address relevant current events in intellectual property law, and the resulting implications to the agricultural and horticultural industries. The goal of the workshop is for participants to gain an understanding of the interface between intellectual property rights, and how to maximize the benefits from protecting those rights. There will be time allotted during the second hour for questions and discussion.

1:45–3:45 PM

Desert Salon 1-2

Workshop—The Challenges of Using Alternative and Recycled Water Sources for Horticultural Use

Sponsor: Water Utilization and Management Working Group

Coordinator: John D. Lea-Cox, jlc@umd.edu

This workshop will illustrate some the issues surrounding the use of alternative and recycled water sources in the production and management of horticultural commodities.

1:45–2:15 PM

The Challenges of Graywater as an Alternative Water Source for Landscape Irrigation

*Raul I. Cabrera

2:15–2:45 PM

Pharmaceuticals and Persistent Organic Micropollutants in Reclaimed Irrigation Water

*Sarah A. White

2:45–3:15 PM

Pesticides in Recycled Water: What Are the Issues?

*Rodney Thomas Fernandez

3:15–3:45 PM

Daily and Seasonal Changes in the Water Quality of Irrigation Containment Ponds

*John D. Lea-Cox

2:00–3:00 PM

Desert Salon 12

Membership Committee Meeting

Marita I. Cantwell, *Chair*; Angela Davis, Matthew Taylor, Tim Rhodus, Mark Uchanski, Carol Lovatt, Paul Bosland, Michael W. Neff

2:00–3:00 PM

Springs Salon C

Plant Nutrient Management (PNM) Working Group Business Meeting

Joseph Albano, *Chair*; Dharmalingam Pitchay, *Chair-elect*; Monica Ozores-Hampton, *Secretary*

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

Wednesday, July 24, 2013

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.

2:00–3:00 PM

Desert Salon 3

Temperate Tree Nut Crops (NUTS) Working Group Business Meeting

Richard Rosecrance, *Chair*; John Preece, *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.

2:00–6:00 PM

Directors Suite VI

Certified Horticulturist Examination

Proctor: George Fitzpatrick

2:30–5:00 PM

Desert Ballroom: Salons 7-8

Exhibits Move Out

3:00–3:30 PM

Springs Salon C

APS Tropical Fruit Tasting

3:00–4:00 PM

Desert Salon 12

Citrus Crops (CITR) Working Group Business Meeting

Glenn Wright, *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

Desert Salon 3

International Horticultural Consultants (ICON) Working Group Business Meeting

Mary Beth Henry, *Chair*; Carl Motsenbocker, *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.

3:30–4:30 PM

Springs Salon C

American Pomological Society (APS) Annual Business Meeting

Chair: Kirk William Pomper

4:00–5:30 PM

Springs Salon F

Presidential Address and ASHS Annual Business Meeting

Presidential Address:

Paul Bosland, ASHS President

Business Meeting:

Presiding: Dewayne L. Ingram, *Chair*, ASHS Board of Directors

Agenda:

- 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 2013–2014 ASHS President and Board of Directors

4:00–7:00 PM

Tour Lobby

Graduate Student Jeep Tour

Coordinator: Jeffrey Norrie, jnorrie@acadian.ca

Thank you to the following organizations for supporting this event: Acadian Seaplants, Brandt, Crop King, Duarte Nursery, Fall Creek Nursery, Farming Systems Research, Fides Ecke, Harris Moran Seed Company, Heinz, Shamrock Seed Company, and Syngenta.

7:00–8:00 PM

Springs Retreat Pool

Student Reception

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

Thursday, July 25, 2013

Thursday, July 25, 2013

7:00–8:00 AM

Tour Lobby

Water Features Tour

Coordinator: Milton E. McGiffen, Jr., milt@ucr.edu

7:15–7:45 AM

Starbucks at J.W Marriott Resort

Graduate Student Working Group Morning Gathering

Coordinator: Kristin Abney, kabney22@gmail.com

Why wait until the student events to meet the other graduate and undergraduate students at ASHS this year? Come by and meet them while you grab your morning cup of coffee (or tea).

7:30–11:30 AM

Tour Lobby

The Living Desert Tour

7:30 AM–3:00 PM

Center & North Registration Counters

Registration Open

8:00–9:00 AM

Springs Salon C

Graduate Student (GRAD) Working Group Business Meeting

Kristin Abney, *Chair*; Amanda Bayer, *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.

8:00–9:00 AM

Desert Salon 11

Waste Utilization in Horticulture (WUH) Working Group Business Meeting

Monica Ozores-Hampton, *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.

8:00–9:30 AM

Desert Salon 4-6

Oral Session—Vegetable Crops Management

Moderator: Gordon Johnson, gcjohn@udel.edu

8:00–8:15 AM

Response of Pigeonpea [*Cajanus cajan* (L.) Millsp.] to Planting Date and Spacing in Alabama

*Rao S. Mentreddy, Rapheal Baggett, Ernst Cebert, Udai R Bishnoi

8:15–8:30 AM

Subsurface Drip Irrigation Affects Water Usage and Yield in Acorn Squash

*Timothy W. Coolong

8:30–8:45 AM

Onion Variety Response to Plant Population and Irrigation System

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

8:45–9:00 AM

Cultivar Adaptability for Midwest Sweetpotato Production

*Ajay Nair, Moriah Bilenky, Ben Bergum

9:00–9:15 AM

Improving Lima Bean (*Phaseolus lunatus*) Productivity in the Mid-Atlantic Region

*Gordon C. Johnson, Emmalea Garver Ernest

9:15–9:30 AM

SWOT Analysis of the Vegetable and Fruit Programs in Texas

*Daniel Leskovar, Marco Palma, Bhimanagouda S. Patil

8:00–9:30 AM

Desert Salon 1-2

Oral Session—Viticulture and Small Fruits

Moderator: Wei Qiang Yang, wei.yang@orst.edu

8:00–8:15 AM

The Effect of Terbacil, Root Injury, and *Rhizoctonia fragariae* on Strawberry and the Development of Black Root Rot

*E.K. Lavelly, B.K. Gugino, K. Demchak, R.P. Marini

8:15–8:30 AM

Genetic Parameter Estimates for Resistance to *Colletotrichum gloeosporioides* and Comparisons with Production Traits in Strawberry

*Jozer Mangandi, Luis F. Osorio, Vance M. Whitaker

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

Thursday, July 25, 2013

8:30–8:45 AM

Extending the Strawberry Season: High Tunnels, Low Tunnels, and Targeted Supplemental Heating

*Tiffany Maughan, Brent Black, Dan Drost

8:45–9:00 AM

Specific Changes in the Expression of Cell Wall Carbohydrate Metabolism Related Genes during Fruit Abscission in Rabbiteye Blueberry

*Tripti Vashisth, Anish Malladi

9:00–9:15 AM

Effect of Rootstock and Soil Amendment on Three Highbush Blueberry Cultivars

*Wei Qiang Yang, Adrienne Basey, Peter Sturman

9:15–9:30 AM

The Effect of Timing and Intensity of Summer Pruning on Vegetative and Reproductive Traits of Southern Highbush Blueberry

*Alisson Pacheco Kovaleski, Jeffrey G. Williamson, Rebecca L. Darnell

8:00–9:45 AM

Desert Salon 9-10

Oral Session—Consumer Horticulture and Master Gardeners

8:00–8:15 AM

Increasing Confidence in Diagnosing Plant Problems with Diagnostic Updates

*Pamela J. Bennett, James C. Chatfield

8:15–8:30 AM

Making Meaning Out of Science: Using Nature's Notebook to Engage Citizens in Exciting and Relevant Research

*Peter Warren, LoriAnne Barnett

8:30–8:45 AM

Permaculture in Community Gardens: A Systems-based Approach to Engaged Design

Abbey E. Piner, *Lucy K. Bradley, Will E. Hooker, Julieta T. Sherk

8:45–9:00 AM

Organic Gardening Educational Materials for Extension Master Gardener Volunteers

Aimee A. Rankin, *Lucy K. Bradley, David Orr, Frank J. Louws

9:00–9:15 AM

The 40 Gallon Challenge: A Simple Effective Educational Tool

*Ellen Bauske, Paul Pugliese, Melanie Biersmith, Emily Pitts

9:15–9:30 AM

Virtual Volunteers: Expanding Extension's Reach with a National EMG Social Media Certification

*Karen Jeannette, Emily Eubanks

9:30–9:45 AM

Seeing in Systems: Helping Community Gardeners Build Resilience and Reduce the Need for Maintenance by Making Permaculture Connections

*Abbey E. Piner, Lucy K. Bradley, Will E. Hooker, Julieta T. Sherk

8:00–10:00 AM

Director Suite III

International Division Breakfast

Coordinator: Esmail "Essie" Fallahi, efallahi@uidaho.edu

Speaker: Clinton C. Shock, clinton.shock@oregonstate.edu
Director of Oregon State University Malheur Experiment Station, Ontario, OR

(Preregistration and prepayment required.)

Topic:

Ending the Cycle of Poverty Among Some of the Rural Poor in Mato Grosso do Sul, Brazil

Professor Shock will focus on his horticultural mission to Brazil. Although his mission goals were achieved, he found that the social needs were more important than those initial horticultural needs and, thus, he redirected his work. Professor Shock and his wife developed farm plans for 52 individual poor farm families out of many thousands and used NGO funds and free market pass-through loans to deliver resources to the families at modern lending institution rates. The selected farm families became more prosperous and escaped abject poverty. Effects spread to neighboring counties. Professor Shock is a nationally and internationally renowned horticulturist who has traveled to many countries and assisted in several horticultural projects, particularly in irrigation projects of onions and potatoes and other crops.

8:00–10:00 AM

Desert Salon 13-14

Oral Session—Teaching Methods

Moderator: James A. Robbins, jrobbins@uaex.edu

8:00–8:15 AM

Effectiveness of Online Laboratory Experiences

*Cynthia B. McKenney, D. Thayne Montague, Ashley Elle

8:15–8:30 AM

Creating Virtual Nursery Trips to Improve On-campus and Distance Education in Nursery Production

*James A. Robbins, Amy N. Wright, Mengmeng Gu

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

Thursday, July 25, 2013

8:30–8:45 AM

Using an Extraordinary Combination of In-person Education and Distance Learning to Help Women Producers Create Business

*Robin G. Brumfield, Jenny Carleo, Jeff Heckman, April Lippet-Faczak, Jennifer Matthews, Meredith Melendez, Barbara O'Neill, Nicholas Polanin

8:45–9:00 AM

Climate Change Literacy in the U.S. Undergraduate Horticulture Curriculum

*Virginia I. Lohr

9:00–9:15 AM

Using Different Teaching Methods to Enhance Student Learning of Climate Change

*Amanda Bayer, Marc van Iersel

9:15–9:30 AM

A Syllabus Rejig: Aligning Course Goals, Learning Objectives, Assignments, and Assessment

*Ann Marie VanDerZanden

9:30–9:45 AM

Continuing Agricultural Education: Relationship between Adult Learning Styles and Educational Delivery Method Preferences

*Kaylee Renick, Ryan M. Foor, Kurt D. Nolte

9:45–10:00 AM

North American Horticulture Graduate Program Survey: Demographics, Policies, Finances, and Metrics

*Michael A. Arnold, R. Daniel Lineberger, Tim Davis, David W. Reed

8:00–10:00 AM

Springs Salon A/B

Workshop—Citrus Breeding

Sponsor: Fruit Breeding Working Group

Moderator: Vance Whitaker, vwhitaker@ufl.edu

Coordinators: Vance Whitaker, vwhitaker@ufl.edu; Glenn Wright, gwright@ag.arizona.edu

Workshop objectives are: 1) Provide an updated perspective on new cultivars and future directions for U.S. citrus breeding programs; 2) Illustrate the tools used in citrus breeding including transgenics, triploidy, somaclonal variation and somatic hybridization; and 3) examine current challenges and opportunities in topic areas such as cold hardiness, resistance to HLB and other diseases, germplasm utilization, rapid-cycle breeding, rootstock development and seedlessness.

8:00–8:20 AM

Underutilized Citrus Germplasm and How to Obtain Priority Germplasm in the United States

*Richard Lee

8:20–8:40 AM

Breeding Citrus for North Florida

*José Chaparro

8:40–9:00 AM

Citrus Breeding at UCR—Progress and Challenges

*Mikeal L. Roose

9:00–9:20 AM

Biotechnology Facilitated Breeding of Improved Citrus

*Jude W. Grosser, Fred Gmitter

9:20–9:40 AM

Transgenic Approaches to Improved Disease Resistance in Citrus

*Manjul Dutt, Jude W. Grosser

9:40–10:00 AM

Critical Needs of U.S. Citrus Growers in Scion and Rootstock Breeding

*Ted Batkin

8:00–10:00 AM

Springs Salon D/E

Workshop—New Innovations in Commercial Horticultural Applications

This workshop will introduce conference participants to new and innovative technologies available for research, teaching, and extension.

8:00–8:20 AM

Amperometric Ethylene Sensor with Interfering Gas Trap

*Michael Larman

8:20–8:40 AM

Drip Irrigation/Plastic Mulch Kits for Home Gardeners

*Keith Williamson

8:40–9:00 AM

ARM Tablet Data Collector

*Steven R. Gylling

9:00–9:20 AM

Optimizing Drip Irrigation System Uniformity with Proper Design and Management

*Inge Bisconer

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

Thursday, July 25, 2013

9:00–10:00 AM

Desert Salon 11

Produce Quality, Safety, and Health Properties (QUAL) Working Group Business Meeting

John Beaulieu, *Chair*; Penelope Perkins-Veazie, *Chair-elect*

The QUAL Working Group promotes more creative research, teaching, and industry liaison among horticulturists and food scientists.

9:45–11:00 AM

Desert Salon 1-2

Oral Session—Ornamentals/Landscape and Turf

Moderator: Erin E Agro, agro@uoguelph.ca

9:45–10:00 AM

Pine Wood Chips as an Alternative to Perlite in Horticultural Substrates: Physical, Chemical, and Cultural Parameters

*Brian Jackson, W. Garrett Owen, William C. Fonteno

10:00–10:15 AM

Effect of Vermicompost-amended Media on Container-grown Miniature Roses

*Pamela Collins, Ekaterina Jeliaskova, Dennis Rowe

10:15–10:30 AM

Determination of Optimal Controlled Release Fertilizer Rates for Container Nursery Crop Production in Cold Climates

*Erin E Agro, Youbin Zheng

10:30–10:45 AM

Impact of Biopots on Landscape Plant Performance and Pot Degradation

*Genhua Niu, Youping Sun, Guihong Bi, Andrew Koeser, Krista Jacobsen, Sven Verlinden, Renee Conneway, Amy Fulcher

10:45–11:00 AM

The Effects of Lawn Plant Diversity on Arthropod Diversity

*Sam Marshall, David Orr, Lucy K. Bradley, Steven Frank, Christopher Moorman

10:00–11:00 AM

Springs Salon C

Consumer Horticulture and Master Gardeners (CHMG) Working Group Business Meeting

Pamela J. Bennett, *Chair*; Ellen Bauske, *Chair-elect*

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.

10:00–11:00 AM

Desert Salon 11

Vegetable Crops Management (VCM) Working Group Business Meeting

Chris Gunter, *Chair*; Ajay Nair, *Secretary*

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

10:00–12:00 PM

Desert Salon 12

Certified Horticulturist (CH) Board Meeting

Fred T. Davies, Jr., *Chair*; Kerrie Badertscher; Steve Carver; Janet C. Cole; Terry Ferriss; George Fitzpatrick; Mary Lamberts; Doug Needham; Karen Panter; Kay Phelps; Susan Steinberg

10:00–4:00 PM

Directors Suite VI

ASHS Board of Directors Meeting

10:15–11:15 AM

Springs Salon A/B

Workshop—Commercial Use of PGRs to Increase Color Development of Fruit

Sponsor: Growth Regulators in Fruit and Nut Production, Working Group

Moderator: Derek D. Woolard, derek.woolard@valent.com

In this workshop, industry representatives will present information about two exciting new PGR products available to commercial fruit growers for increasing the coloration of fruit.

10:15–10:30 AM

The Use of S-Abscisic Acid for the Enhancement of Grape Coloration

*Rob Fritts, Derek D. Woolard, Rick Hopkins, Julio Retemales, Johnny Lopez, Daniel Leep, Johan Pienaar

10:30–10:45 AM

BLUSH™, a New Fruit Color Enhancer for Apples

*Kevin Forney

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

Thursday, July 25, 2013

10:15–11:30 AM

Desert Salon 9-10

Oral Session—Plant Biotechnology

Moderator: Ioannis Tzanetakakis; itzaneta@uark.edu

10:15–10:30 AM

Plant Responses to Bacterial Quorum Sensing

*Kubilay Kurtulus Bastas

10:30–10:45 AM

Development and Preliminary Evaluation of the IStraw90 Axiom® Array in Cultivated Strawberry (*Fragaria ×ananassa*)

*Nahla V. Bassil, Iraida Amaya, Francois Bellon, Thomas M. Davis, Beatrice Denoyes, T. van Dijk, Stephen Ficklin, Amy F. Iezzoni, Sook Jung, Lise Mahoney, Dorrie Main, Mike Mittman, Amparo Monfort, Cameron Peace, Ali Pirani, Daniel Sargent, Theresa Webster, Dave Wood, Y. Yang, H. Zhang, Eric van de Weg

10:45–11:00 AM

Transcriptome Analysis of *Vernicia fordii* Seed in Three Development Stages

Xiao-Feng Tan, *Hongxu Long, Guixiong Jiang, Lin Zhang, Donglin Zhang, Fangfang Yan

11:00–11:15 AM

An Automatic Bioinformatics Tool to Detect and Discover Plant Viruses

Thien Ho, *Ioannis Tzanetakakis

11:15–11:30 AM

Rapid High-level Transient Expression of Vampire Bat Plasminogen Activator (DSPA α 1) in Plant for Stroke Treatment with a DNA Replicon System

*Kevin Y. Wang, Frank Y. Yau, Mona Easterling

10:15–11:30 AM

Springs Salon D/E

Oral Session—Weed Control and Pest Management

Moderator: Harlene Hatterman-Valenti, h.hatterman.valenti@ndsu.edu

10:15–10:30 AM

Evaluation of Herbicide Damage to Grapes in a Unique Growing Season

*Paul E. Read, Stephen J. Gamet

10:30–10:45 AM

Composting as an Alternative Management System for Wild Taro (*Colocasia esculenta*) and Brown Algae (*Sargassum fluitans* and *Sargassum natans*)

*Jennifer Sembera, Tina Waliczek Cade

10:45–11:00 AM

Early-season Weed Control in Direct-seeded Onion

*Harlene Hatterman-Valenti, Collin P. Auwarter

11:00–11:15 AM

Successful Control of the Erythrina Gall Wasp in Hawaii

*Leyla Kaufman, Juliana Yalemara, Cynthia King, Mark Wright, Andrew Kaufman

11:15–11:30 AM

Research on the Quarantine Pathogen *Phytophthora ramorum* at the National Ornamentals Research Site at Dominican University of California (NORS-DUC)

*Wolfgang Schweigkofler, Kathleen Kosta, Karen Suslow, Tomas Pastalka, Vernon Huffman, Supriya Sharma, Sibdas Ghosh

10:15–12:00 PM

Desert Salon 4-6

Oral Session—Water Utilization and Management

Moderator: Oleg Daugovish, odaugovish@ucdavis.edu

10:15–10:30 AM

Differential Susceptibility of Strawberry to Salts

*Oleg Daugovish, Ben Faber, Anna D. Howell, Cameron Chandler

10:30–10:45 AM

Physiological Responses of Citrus to Partial Rootzone Drying Irrigation Strategies

Antonia Romero-Conde, Ayako Kusakabe, *Juan Carlos Melgar

10:45–11:00 AM

Irrigation and Nitrogen Management Web-based Software for Lettuce Production

*Michael D. Cahn, Richard F. Smith, Timothy K. Hartz, Bryon J. Noel

11:00–11:15 AM

The Effects of Crop Load and Water Stress on Yield and Fruit Quality of Sweet Cherry Cultivars

*Denise Neilsen, Gerry Neilsen, Tom Forge, John A. Cline

11:15–11:30 AM

Performance of Landscape Trees in the Semi-Arid Southwest under Three Irrigation Regimes

*Ursula K. Schuch, Edward C. Martin, Tilak Mahato, Jay Subramani

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

Thursday, July 25, 2013

11:30–11:45 AM

Evaluation of a Vegetative Landform Cap to Reduce Water Percolation

*Edward W. Bush, Jeffrey S. Beasley, Magee Shaw

11:45–12:00 PM

Sustainable Water Management Strategies for California Table Grapes

*Isabel Abrisqueta, James E. Ayars, Andrew J. McElrone

10:15 AM–12:15 PM

Desert Salon 13-14

Workshop—Teaching with Tablets and Apps

Sponsor: Computer Applications in Horticulture Working Group

Moderator: Tim Rhodus, rhodus.1@osu.edu

Coordinators: Tim Rhodus, rhodus.1@osu.edu; Kent D. Kobayashi, kentko@hawaii.edu

The goal of this workshop is to learn how other educators have incorporated tablets and apps into their teaching and how that decision affects the type of assignments and activities that are presented to students.

10:15–10:30 AM

Workshop Overview

*Tim Rhodus

10:30–10:45 AM

Teaching with Tablets and Apps over Wireless

*Tim Rhodus

10:45–11:00 AM

Students Keep Your Cell Phones On, Please

*Margaret J. McMahon

11:00–11:15 AM

Enhancing Tropical Plant and Soil Sciences (TPSS) Instruction with Mobile Devices

*Kent D. Kobayashi, Theodore J.K. Radovich

11:15–11:30 AM

Live Lecture Capture with Whiteboard Annotation and iTunesU Delivery for Asynchronous Learning

*Steven Earl Newman

11:30–11:45 AM

Accessing Real-time Data from Sensor Networks

*John D. Lea-Cox, David Kohanbash, George Kantor

11:00–12:00 PM

Desert Salon 11

Ornamental Plant Breeding (OPB) Working Group Business Meeting

Wenhao Dai, *Chair*; Bruce Dunn, *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.

11:15 AM–12:15 PM

Desert Salon 1-2

Oral Session—Nursery Crops

Moderator: Alison Stoven O'Connor, astoven@larimer.org

11:15–11:30 AM

Landscape Transplant Success of Chanticleer® Pear Grown in Three Container Types

*Alison Stoven O'Connor, Anthony J. Koski, James E. Klett, Daniel K. Struve

11:30–11:45 AM

Plant Growth and Water Use in Plastic, Fiber, Keratin, and Root Pouch Containers

*Xueni Wang, Rodney Thomas Fernandez, Guihong Bi, Amy Fulcher, Robert L. Geneve, Genhua Niu, Sven Verlinden, Bert Cregg, Mathieu Ngouajio, T. Kijchavengku, Rafael Auras, Susmitha Nambuthiri, Renee Conneway, Youping Sun

11:45–12:00 PM

Photosynthetic and Morphological Response of *Abies fraseri* (Pursh) Poir to the Combined Effect of Irrigation and Fertilization in Controlled Environment

*Ismail Koc, Pascal Nzokou

12:00–12:15 PM

Determining the Carbon Footprint of Tree Production System Components in Field Nurseries using Life Cycle Assessment (LCA)

*Dewayne L. Ingram

11:30–1:30 PM

Springs Salon A/B

Workshop—RosBREED Fruit Quality QTLs: From Publications to Applications

Sponsor: Genetics and Germplasm Working Group

Moderator: Cholani Kumari Weebadde, weebadde@msu.edu

Coordinator: Amy F. Iezzoni, iezzoni@msu.edu

Share experiences from the RosBREED project with the horticultural breeding community: (1) illustrate that QTL results

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Thursday, July 25, 2013

are only the first step toward marker-assisted breeding; (2) explain how the desirable functional alleles need to be identified and then used to influence selection decisions; (3) demonstrate how QTL information can be translated into a genetic test for use in marker-assisted breeding; and (4) illustrate the use of genetic tests developed by RosBREED in fruit breeding programs to validate germplasm used for developing better cultivars

11:30–11:45 AM

Discovering a QTL: A Major Milestone or a Stepping-stone into Practical Marker-assisted Breeding?

*Cholani Kumari Weebadde

11:45–12:00 PM

You've Just Identified a QTL for a Major Trait of Interest—What Now? QTL and QTL Allele Validation in Cherry

*Amy F. Iezzoni

12:00–12:15 PM

QTL and QTL Allele Validation in Apple

*Sujeet Verma

12:15–12:30 PM

QTL and QTL Allele Validation in Peach

*Ksenija Gasic

12:30–12:45 PM

Marker-assisted Breeding for Apple at the University of Minnesota and Washington State University

*James Luby

12:00–1:00 PM

Desert Salon 11

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

Teri Gadd, *Chair*; Peter Dittmar, *Chair-elect*; Carlene Chase, *Secretary*

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

12:30–2:00 PM

Desert Salon 9-10

Oral Session—Environmental Stress Physiology

Moderator: Craig Ramsey, craig.l.ramsey@aphis.usda.gov

12:30–12:45 PM

Do Canker Pathogens Limit the Supply of CO₂ for Photosynthesis? Estimation of Stomatal and

Internal Limitations in Maple Leaves in Response to *Phytophthora cactorum* Inoculations

*Hyungmin Rho, Drew Zwart, Soo-Hyung Kim

12:45–1:00 PM

Biochar Amendment Alters the Effects of *Phytophthora* Cankers on Leaf Physiology of *Acer rubrum*

*Drew Zwart, Soo-Hyung Kim

1:00–1:15 PM

The Effects of Chlorine Dioxide on SAR Plant Immunity Responses to a Bacterial Wilt Infection

*Craig Ramsey, Heather Hammack, Steven Earl Newman

1:15–1:30 PM

A Soybean β -Expansin Gene GmEXPB2 Involved in Root System Architecture Responses to Abiotic Stresses in Transgenic *Arabidopsis*

*Xinxin Li, Hye-Ji Kim, Hong Liao

1:30–1:45 PM

Abscisic Acid Inhibits Leaf Expansion by Limiting Cell Expansion But Not Cell Division in *Arabidopsis*

Shinsuke Agehara, Scott Finlayson, *Daniel Leskovar

1:45–2:00 PM

Growth and Physiological Responses of Bermudagrass to Salinity Stress

*Ran Xu, Sr., Hideyasu Fujiyama, Sr.

12:30–2:00 PM

Desert Salon 4-6

Oral Session—Organic Horticulture

Moderator: Brian Ward, bw@clemson.edu

12:30–12:45 PM

The Effect of Biochar and Fertilizers Made from Plant Extracts on Crop Growth and Nitrogen Leaching with Containerized Greenhouse Plants

*Touria E. Eaton, Douglas A. Cox

12:45–1:00 PM

Influence of Organic Versus Synthetic Nitrogen Fertigation on Sweet Corn Yield, Quality, and Nutritional Quality

*Brian Ward

1:00–1:15 PM

Organic Agriculture in the Kingdom of Saudi Arabia

*Khalid Al-Redhaiman

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

Thursday, July 25, 2013

1:15–1:30 PM

Assessing the Suitability of Biofumigation and Anaerobic Soil Disinfestation to Improve Vegetable Crop Performance in Michigan

*Aaron Yoder, Mathieu Ngouajio

1:30–1:45 PM

Investigating Vermicompost as the Primary Fertilizer Source in Organic Vegetable and Flower Transplant Production

*Stephanie Beeks, Neil Mattson

1:45–2:00 PM

Exploring Best Organic Soil/Pest Management Practice through Farm Systems Analyses (FSAs) of Organic Vegetable Farms

*Alexandra Stone, Helen Atthowe, William Snyder, Michelle Wander

12:30–2:00 PM

Desert Salon 13-14

Oral Session—Plasticulture

Moderator: Jeremy Cowan, jeremy.cowan@wsu.edu

12:30–12:45 PM

New Jersey's Agricultural Plastics Recycling Program

*Wesley L. Kline, Karen Kritz

12:45–1:00 PM

Impacts from Three Years of an Integrated High Tunnel Project in Mississippi

*William B. Evans, Guihong Bi, Mengmeng Gu, Vasile Cerven

1:00–1:15 PM

Deterioration of Three Biodegradable Plastic Mulches before and after Soil Incorporation in a Broccoli Production System

*Jeremy Cowan, Carol A. Miles, Debra Inglis

1:15–1:30 PM

Plasticulture Grown Cabbage: Effects of Plant Population and Planting Dates on Crop Yield

*Charles Barrett, Lincoln Zotarelli, Lucas Paranhos, Guilherme B. Buck, Mihai Giurcanu

1:30–1:45 PM

Evaluating Visual Assessments of Mulch Deterioration to Predict Changes in Mulch Mechanical Properties

*Jeremy Cowan, Carol A. Miles, Karen Leonas, H. Liu, Arnold Saxton, Debra Inglis

1:45–2:00 PM

The Evolution of Ohio Strawberry Plasticulture Production (2001–2013)

*Brad R. Bergefurd, Barclay Poling, Shawn Wright

12:30–2:30 PM

Desert Salon 1-2

Oral Session—Floriculture

Moderator: Alicain S. Carlson, ascarlso@ncsu.edu

12:30–12:45 PM

The Effect of Nitrogen and Potassium Fertilization on Growth and Nutrient Content of Container-grown Dahlia 'Magic Moment'

*Matthew D. Taylor, Timothy E. Elkner

12:45–1:00 PM

Growth Regulators Applied to Poinsettias in Production Affect Cyathia Drop and Bract Edge Burn in Postproduction

*James E. Barrett, Carolyn A. Bartuska, Robert F. Weidman

1:00–1:15 PM

Evaluation of Heliconia Cut-flower Production under Shading

Alma R. Solís Pérez, *Raul I. Cabrera, E. Israel Silva Hernández, Eduardo Fuentes Sánchez, Edgardo Zalazar Marcial

1:15–1:30 PM

Developing Production and Postharvest Protocols for Cut *Penstemon grandiflorus* 'Esprit'

*Alicain S. Carlson, John M. Dole

1:30–1:45 PM

Development and Evaluation of Injection-molded Bioplastic Container Prototypes

*James Schrader, Kenneth McCabe, Gowrishankar Srinivasan, Kyle Haubrich, David Grewell, Samy Madbouly, Michael Kessler, William Graves

1:45–2:00 PM

Identification of the Rose Rosette Disease Agent

Patrick Di Bello, Thien Ho, *Ioannis Tzanetakis

2:00–2:15 PM

Global Gene Expression Changes in Response to Bent Neck and Petal Blueing in Cut Roses 'Freedom' and 'Forever Young'

*Alicain S. Carlson, Hao Zhu, George Allen, John M. Dole, Bryon Sosinski, John D. Williamson

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Thursday, July 25, 2013

2:15–2:30 PM

The North Carolina Cut Flower Industry: Results of a Production and Marketing Survey

*Halley Granitz, Julia L. Kornegay, John M. Dole, Charles Safley

12:30–2:30 PM

Springs Salon D/E

Oral Session—Marketing and Economics

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

12:30–12:45 PM

Partial and Enterprise Budgets for Growing Hard Cider Apples in Virginia

*Gregory Michael Peck, Gordon Groover, Jarrad Farris

12:45–1:00 PM

Relevance of Apple Quality Traits for Consumers

*Lilian Carrillo, R. Karina Gallardo, Chengyan Yue, Vicki McCracken, James Luby, James R. McFerson, Ines Hanrahan

1:00–1:15 PM

Consumer Characteristics Affect on Local and Organic Purchasing

*Lingqiao Qi, Ben Campbell, Yizao Liu

1:15–1:30 PM

Look at What Is Important: Eye-tracking Research on Plant Displays

*Bridget K. Behe, Ben Campbell, Hayk Khachatrayn, Charles R. Hall, Jennifer Dennis

1:30–1:45 PM

Market Viability of Native Central Texan Plants as a Food Source

*Benjamin J. Glover, Tina Waliczek Cade, Jean-Marc Gandonou

1:45–2:00 PM

Gender Analysis of Labor and Resources in Greenhouse Vegetable Production in Turkey

Burhan Özkan, *Robin Brumfield

2:00–2:15 PM

Economic Potential of Producing Tahiti Limes in Southern Florida in the Presence of Citrus Canker and Greening

*Edward Evans, Fredy Ballen, Jonathan H. Crane

2:15–2:30 PM

Commercialization of Underutilized Crops: Purple-fruited Pitanga—A Case Study

*John L. Griffis, Jr., Carl E. Sams, Malcolm M. Manners,

Theodore J.K. Radovich, Ty G. McDonald

1:00–2:00 PM

Desert Salon 3

Computer Applications in Horticulture (COMP) Working Group Business Meeting

Kent Kobayashi, *Chair*; Arthur Villordon, *Secretary*

The COMP Working Group studies the application of computers in research, extension, and teaching of horticulture.

1:00–5:00 PM

Desert Salon 12

Certified Horticulturist Examination 2

1:45–4:00 PM

Springs Salon A/B

Oral Session—Produce Quality, Safety, and Health Properties

Moderator: Touria E. Eaton, eaton@umext.umass.edu

1:45–2:00 PM

Mineral Nutrient Density of Cabbage in Response to Cultivar Selection and Nutritional Regimes

*Touria E. Eaton, Allen V. Barker, Md J. Meagy, Emad Jahanzad

2:00–2:15 PM

Enzyme, Temperature, and Processing Effects on the Percentage of Juice Recovery and Anthocyanin Changes in Blueberries

*John C. Beaulieu, Rebecca E. Stein

2:15–2:30 PM

Field Based Evaluations of Trace Element Transfer from Contaminated Urban Garden Soils to Vegetables

*Ganga M. Hettiarachchi, Chammi Attanayake, Phillip Defoe, Sabine Martin, Gary M. Pierzynski

2:30–2:45 PM

Developing an On-farm Decision Tree for Fresh Produce Growers to Assess Risks and Prioritize Implementation of Food Safety Practices

Elizabeth Bihn, Michele A. Schermann, *Annette L. Wszelaki, Gretchen L. Wall, Susannah K. Amundson

2:45–3:00 PM

In Vitro Antioxidant Activities of *Annona squamosa* Leaf and Identification of Bioactives by LC-ESI-MS-Qtof

*G.K. Jayaprakasha, Bhimanagouda S. Patil

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Thursday, July 25, 2013

3:00–3:15 PM

Studying Quality Attributes of Grafted Specialty Melons using Both Consumer Sensory Analysis and Instrumental Measurements

*Wenjing Guan, Xin Zhao, Charles A. Sims

3:15–3:30 PM

High Throughput Screening of Pyruvic Acid in Onions using Microplate Reader

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

3:30–3:45 PM

Electron Beam Irradiation of Fresh Cut Cantaloupe under Modified Atmosphere Extends the Shelf Life and Maintains the Quality

*Ram M. Uckoo, Bianca Smith, G.K. Jayaprakasha, Suresh D Pillai, Kevin M. Crosby, Bhimanagouda S. Patil

3:45–4:00 PM

Microgreens: Assessment of Nutrient Concentrations

*Gene E. Lester, Zhenlei Xiao, Yaguang Luo, Qin Wang

2:00–3:00 PM

Desert Salon 11

Environmental Stress Physiology (STRS) Working Group Business Meeting

Hannah Mathers, *Chair*; Lloyd Jones, *Chair-elect*; Genhua Niu, *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.

2:00–3:00 PM

Springs Salon C

Teaching Methods (TCHG) Working Group Business Meeting

David Kopsell, *Chair*; Cynthia Haynes, *Chair-elect*; Brian Trader, *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.

2:15–3:45 PM

Desert Salon 4-6

Oral Session—Vegetable Crops Management

Moderator: Derek D. Woolard, derek.woolard@valent.com

2:15–2:30 PM

Growth Control of Leafy Vegetables with S-Abscisic Acid (S-ABA) for Improved Quality and Harvest Management

*Derek D. Woolard, Frederick Marmor, Paul Silverman, Liu Xiaozhong, Peter D. Petracek, Daniel Leep, Rob Fritts, Gregory Venburg, Johan Pienaar, Jozsef Racsko

2:30–2:45 PM

Downy Mildew of Basil in Illinois: Occurrence and Management

*Mohammad Babadoost, Alan DeYoung

2:45–3:00 PM

Growth, Yield, Fruit Quality, and Verticillium Wilt Tolerance of Grafted Watermelon and Tomato in Field Production in the Pacific Northwest

*Carol A. Miles, Sacha Johnson, Debra Inglis

3:00–3:15 PM

Determination of Bacterial Contamination in Orange and Black Carrot Seeds

*Kubilay Kurtulus Bastas

3:15–3:30 PM

Efficient Intercropping for Biological Control of Aphids in Organic Lettuce

*Eric Brennan

3:30–3:45 PM

Intercropping to Mitigate Salinity Stress on Watermelon: Halophyte Performance in a Greenhouse Pot Study

Catherine Simpson, *Jose G. Franco, Stephen R. King, Astrid Volder

2:15–4:00 PM

Desert Salon 13-14

Oral Session—Human Issues in Horticulture

Moderator: Candice Shoemaker, cshoemak@ksu.edu

2:15–2:30 PM

People's Psychophysiological Responses to Tropical Urban Tree Pruning in Hawaii

*Andrew Kaufman, Aarthi Padmanabhan, Aliah Irvine, Dioreme Navasca, Sang Mi Lee

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Thursday, July 25, 2013

- 2:30–2:45 PM
Exercise Intensities of Gardening Tasks as a Physical Activity in Children and Adults by using Mets
*Sin-Ae Park, A-Young Lee, Ho-Sang Lee,
Kwan-Suk Lee, Ki-Cheol Son, Candice Shoemaker
- 2:45–3:00 PM
School Gardening Program for Improving Social Relations of Elementary School Students
*Sin-Ae Park, Seong-Sil Kim, Ki-Cheol Son
- 3:00–3:15 PM
An Evaluation of the Fayetteville School Landscape Project
*Ann Fleener, Carolyn W. Robinson, Donald J. Eakes,
David Williams, Robert E. Lyons
- 3:15–3:30 PM
Can Locally-grown Crops Replace Nonfat Dry Milk in Ready-to-Use-Therapeutic Foods? Innovative Malnutrition Solutions for Haiti
Natalie Bumgarner, Stephanie Short, Corey Ballard,
Daniel J. Schmitz, Yael Vodovotz, *Matthew D. Kleinhenz
- 3:30–3:45 PM
Career Exploration of Horticultural Therapy Professionals
Anna Shinjo, *Candice Shoemaker
- 3:45–4:00 PM
Integrating Schools, Community, and Family to Effect Sedentary Behavior, Fruit and Vegetable Consumption, and Physical Activity through Gardening
*Candice Shoemaker, Cynthia Domenghini,
George Milliken, Gregory Welk, David A. Dzewaltowski
-
- 2:15–4:00 PM Desert Salon 9-10
Oral Session—Pomology
Moderator: Clive Kaiser, clive.kaiser@oregonstate.edu
- 2:15–2:30 PM
Impacts and Outcomes of Integrated Pest Management Extension Programs in Umatilla County, Oregon
*Clive Kaiser, Leonard Coop, Kevin Masterson
- 2:30–2:45 PM
Ratio of Carbon to Nitrogen in Peach and Susceptibility to Peach Tree Short Life
*Gregory L. Reighard, Newton Alex Mayer,
David Michael Glenn, W.C. Bridges, Jr.
- 2:45–3:00 PM
Impact of Nitrogen on Vegetative Growth of Mature Peach Trees in a Subtropical Climate
*Mercy A. Olmstead, Lincoln Zotarelli, Matthew Ross
- 3:00–3:15 PM
Fruit Development Alters the Vegetative and Reproductive Shoot Growth in ‘Hass’ Avocado (*Persea americana*, Mill.)
*Rodrigo Iturrieta, Mary Lu Arpaia, Harley Smith
- 3:15–3:30 PM
Cutting Type and Time-of-Year Affect Rooting Ability of Hardy Minnesota *Prunus*
*Emily Hoover, Neil O. Anderson, Emily Tepe,
John Tillman
- 3:30–3:45 PM
Developmental Sensitivity of European Pear and Sweet Cherry Floral Buds to Sub-zero Temperatures from Late Dormancy through Petal Fall
*Todd Einhorn, David Gibeaut
- 3:45–4:00 PM
Developing Autonomous Pruning for Specialty Crops
*Peter M. Hirst, Tara Auxt Baugher, Leland Glenna,
Avinash Kak, Johnny Park, Tony Koselka,
Anouk Patel-Campillo, James R. Schupp, Clark F. Seavert,
Julie M. Tarara, Bret Wallach
-
- 2:45–4:00 PM Springs Salon D/E
Oral Session—Propagation
Moderator: Donglin Zhang, donglin@uga.edu
- 2:45–3:00 PM
Impact of Location, Seasonality, and Iba Concentration on Rooting of *Prunus angustifolia*
*Elizabeth McMahon, Bruce Dunn, Eric Stafne
- 3:00–3:15 PM
K-Iba Concentration Regulated Rooting Quality and Plant Vigor of *Prunus laurocerasus* L.
Yujie Yang, *Donglin Zhang, Jinying Dong, Zhihui Li
- 3:15–3:30 PM
Light Quality Affects Microshoot Growth of Apple Rootstocks: B.9 & G.30
*Fang Geng, Renae Moran, Donglin Zhang
- 3:30–3:45 PM
Fine-Root Dynamics of Apple (*Malus domestica* Borkh.) Rootstocks under Replant Condition
*Amaya Atucha, Bryan Emmett, Taryn Bauerle
- 3:45–4:00 PM
Protocol for the Micropropagation of Commercial Cultivars of Date Palm (*Phoenix dactylifera* L.)
*Nasser S. Al-Khalifah

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Friday, July 26 and Saturday, July 27, 2013

2:45–4:30 PM

Desert Salon 1-2

**Oral Session—Plant Nutrient
and Horticultural Waste Management**

Moderator: Aziz Baameur, azbaameur@ucdavis.edu

2:45–3:00 PM

Pepper N Uptake: Preliminary Field Study

*Aziz Baameur, Richard F. Smith

3:00–3:15 PM

Soil Surfactant Increases Nutrient Use Efficiency and
Yield of Tomato Grown in Sandy Soil

*Guodong Li

3:15–3:30 PM

Biochar Increases the Ion Exchange Capacity of
Potting Mix

*Elizabeth Crutchfield, Milton E. McGiffen, Jr.,
Donald J. Merhaut

3:30–3:45 PM

The Effect of Nutrient Ratios on Plant Height

*Laura A. Wisner, Theo J.M Blom

3:45–4:00 PM

Quantifying the Impact of Macronutrients on
Substrate pH

*Jared Barnes, Paul V. Nelson, Brian E. Whipker,
Dean Hesterberg, Wei Shi, Dave Dickey

4:00–4:15 PM

University Campus Composting Programs: Initiatives
for the Future

*Jennifer Sembera, John Montoya, Jr.,
Tina Waliczek Cade

4:15–4:30 PM

Incorporating Wool-waste into Compost to Develop
Alternative Compost Products

*Tina Waliczek Cade, Erica Jane Meier,
Gwendolyn Hustvedt

Friday, July 26, 2013

8:00 AM–5:00 PM

Griffin Room

NE-1036 Technical Committee Meeting

Saturday, July 27, 2013

8:00 AM–12:00 PM

Griffin Room

**NE-1036 Technical Committee Meeting:
Day 2**

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

Index of Authors, Coordinators, Presenters, and Moderators Listed in the Day-by-Day Schedule

A

Abbas, Tahira	83	Amaya, Iraida	57, 107
Abbott, Albert	79	Ambuko, Jane	86, 95
Abbott, John	89	Amore, Teresita D.	53
Abdul, Salem.....	72	Amundson, Susannah K.....	111
Abney, Kristin	47, 59, 67, 87, 88, 100, 103	Anderson, Dan	97
Abrisqueta, Isabel	108	Anderson, Natalie	93
Achenbach, Jef.....	86	Anderson, Neil O.	59, 97, 113
Acuna, Gerleene.....	68	Andrade-Martínez, Eric	73
Adkins, Craig	54	Anotnious, George	96
Agarwal, M.L.....	51, 72, 96	Anwar, Raheel.....	79, 92
Agehara, Shinsuke	109	Arachchige, Pabodha G. Galgamuwe	56
Agro, Erin E.....	106	Arancibia, Ramon A.....	54, 64, 75, 82, 95
Aguayo, Ingrid	78	Araya, Manuel.....	94
Aguiar, Jose Luis.....	53, 91	Argumedo, A.....	72
Aguilar-Castillo, J.A.	73, 94	Arnold, Michael A.	60, 73, 105
Ahmad, Iftikhar	54, 68, 86	Arpaia, Mary Lu.....	113
Ahmad, Riaz	93	Ashbaugh, Elizabeth	55
Ahmed, Waqar	79	Astatkie, Tess	79
Ahmed, Zienab F.R.	82	Attanayake, Chammi.....	111
Ahn, Byung Joon	66	Atthowe, Helen	63, 110
Ahn, Soon Young	51	Atucha, Amaya.....	113
Aipperspach, Andrew D.....	96	Auras, Rafael.....	98, 108
Aitkenhead-Peterson, Jacqueline	73	Aust, Amelie	91, 101
Akai, Manami	62	Auwarter, Collin P.....	107
Albano, Joseph.....	56, 89, 98, 101	Avitia, Edilberto	53
Albrecht, Mary Lewnes	71, 99	Ayala-Silva, Tomas	58
Albrigo, Leo Gene	82	Ayars, James E.	98, 108
Alejo-Santiago, Gelacio	94	Ayub, C.M.....	83
Alem, Peter	66, 84	Azarenko, Anita	63, 82, 88, 89
Al-Khalifah, Nasser S.	113		
Allan, Cara J.....	72	B	
Allen, Arthur	61, 99	Baameur, Aziz	114
Allen, George	110	Babadoost, Mohammad	112
Almutairi, Khalid	53	Baba, Noriko	56
Al-Redhaiman, Khalid	109	Bachie, Oli G	53, 63
Alsadon, Abdulla A.	52, 54, 77	Bachman, Gary	55, 66, 89, 92
Altland, James.....	56, 100	Badertscher, Kerrie	89, 106
		Bae, Kyung-Mi	51
		Baggett, Rapheal	103

Bai, Jinhe.....	60, 75	Beasley, Jeffrey S.....	108
Baird, James H.....	73	Beaudry, Randolph.....	61, 66
Bai, Xianjin.....	69	Beaulieu, John.....	80, 106, 111
Balal, Rashad M.....	83	Beckman, Thomas G.....	72, 90
Baldwin, Elizabeth.....	60, 66, 75, 100	Beckstrom, Karson.....	81
Ballard, Corey.....	113	Beeks, Stephanie.....	110
Ballen, Fredy.....	111	Behe, Bridget.....	49
Balles, John.....	72	Behe, Bridget K.....	69, 79, 111
Ballington, James R.....	57	Belayneh, Bruk E.....	67, 86
Balois-Morales, Rosendo.....	94	Bellon, Francois.....	107
Bang, Haejeen.....	78, 82	Bell, Richard L.....	51
Bang, Sun-Bai.....	53	Benloch-Gonzalez, Maria.....	92
Ban, Smiljana Goreta.....	52	Bennett, Pamela J.....	59, 71, 104, 106
Barchenger, Derek W.....	95	Benson, D. Michael.....	77
Barden, Charles.....	56	Bergefurd, Brad R.....	80
Barickman, T. Casey.....	55	Bergum, Ben.....	103
Barker, Allen V.....	111	Bernstein, Emily R.....	77
Barnard, Dave M.....	67, 86, 87	Berry, Adrian D.....	95
Barnes, Brent.....	73	Betancourt, Jorge-Edwin.....	82
Barnes, Jared.....	114	Bettiga, Larry J.....	87
Barnett, LoriAnne.....	104	Bevington, Rosa.....	98
Barney, Danny.....	61	Bewick, Thomas A.....	58, 83
Barrera, Wilmer.....	95	Beyl, Caula.....	61
Barrett, Charles.....	86, 110	Bidani, Amira.....	72
Barrett, James E.....	68, 110	Biersmith, Melanie.....	104
Barrier, Hunter R.....	57	Bi, Guihong.....	50, 56, 68, 76, 97, 106, 108, 110
Bartoshuk, Linda.....	60	Bihn, Elizabeth.....	111
Bartuska, Carolyn A.....	68, 110	Bilenky, Moriah.....	85, 103
Basey, Adrienne.....	104	Binder, Brad M.....	74
Bassil, Nahla.....	51, 53, 57, 63, 71, 72, 90, 93, 107	Bink, Marco.....	71
Bastas, Kubilay Kurtulus.....	79, 90, 107, 112	Bisconer, Inge.....	105
Bateman, Anthony.....	52	Bishnoi, Udai R.....	103
Bates, Ricky.....	67	Bishop, Nahshon.....	53
Batkin, Ted.....	105	Björkman, Thomas.....	62, 64, 73, 76, 83, 97
Batley, Jacqueline.....	58	Bjostad, Lou.....	78
Bauerle, Taryn.....	80, 113	Black, Brent.....	72, 104
Bauerle, William L.....	67, 78, 86, 87	Blazich, Frank A.....	68
Bauermeister, David.....	90	Blenda, Anna.....	79
Baughner, Tara Auxt.....	113	Blom, Theo J.M.....	114
Bauske, Ellen.....	59, 104, 106	Bluhm, Burton H.....	77
Bayer, Amanda.....	87, 103, 105	Bo, Feng.....	97

Bohnert, Catherine	53, 98	Brumfield, Robin.....	93, 111, 105
Bolda, Mark	53	Bryan, Donita	84
Bolssen, Katie A.....	73	Bryant, Douglas	53
Borman, Christopher	94	Bryant, Ray	61, 99
Bos, Chelle	101	Brye, Kristofer	97
Bosland, Paul	47, 49, 60, 61, 79, 80, 82, 99, 101, 102	Bryla, David	71
Bostock, Richard M.	93	Bryla, David R.	53, 80
Bottone, I.....	61	Brym, Zachary	72
Boucherle, Robert	79	Buchanan, David.....	60, 74
Boue, Stephen	50	Buck, Guilherme B.	86, 110
Bourne, Tim	91	Bugarin-Montoya, R.	94
Bourne, Timothy F.	101	Bugarin-Montoya, Ruben	73, 94
Bowen, Mary S.	95	Bull, Carolee	90
Bowman, John E.	96	Bumgarner, Natalie	55, 85, 113
Boyer, Cheryl R.	56, 67, 76, 100	Burnett, Stephanie.....	84, 93
Bracy, Regina P.	73, 76	Burrows, Rhoda L.....	71
Bradley, Lucy K.	55, 79, 92, 104, 106	Burton, Nadine M.	98
Bradshaw, Joan P.....	78	Bushakra, Jill M.	53
Brainard, Daniel C.	63, 76, 97	Bush, Edward W.....	65, 108
Braman, Kris	54	Bussan, Alvin J.....	73
Branaman, Tatum	57	Byrd, Robert.....	61
Brantley, Ryan.....	66	Byrne, David H.	61, 93
Brar, Gurreet	76	C	
Bravo, Ariana P. Torres	87	Cabrera, Raul I.....	85, 101, 110
Bravo, Carolina	66	Cade, Tina Waliczek	50, 107, 111, 114
Brecht, Jeffrey K.	60, 66, 95	Cahn, Michael	87
Brennan, Eric	112	Cahn, Michael D.	107
Brewer, Linda.....	83	Cai, Bin	85
Bridges, W.C.	113	Cain, David W.....	72
Brindley, Julie	93	Callahan, Ann.....	59, 71
Brodersen, Craig	75	Cambardella, Cynthia	63, 97
Bronson, Kevin	50	Camerino, Anthony	73
Brown, Allan	57, 61, 63, 77	Cameron, Randall	75
Brown, Charles R.....	59	Campbell, Ben.....	69, 111
Browne, Greg	65	Campbell, Craig	53, 71, 94
Brown, J. Wyatt.....	66	Campbell-Palmer, Leslie.....	74
Brown, Michael.....	59	Cantrell, Charles	73, 79
Brown, Rebecca N.	53, 99	Cantwell, Marita I.	66, 82, 101
Brown, Susan K.	71, 93	Cao, Jiwu.....	51
Brown, Wyatt	80	Cao, Zhe	97

Capik, John M.	65, 90	Cheng, Zong-Ming.....	85
Carleo, Jenny.....	105	Chica, Eduardo J.	82
Carlson, Alicain S.	110	Choi, Chang Sun	57
Carlson, Craig	52	Choi, Jae-Keun.....	53
Carmichael, Travis R.	56, 76	Choi, Keun-Jin	51
Caro-Velarde, Francisco de Jesus	73	Choi, Saeum	81
Carpenter, Brandon	85	Choi, Yong Seok	54
Carpenter, Richard	55	Choi, Young Cheol.....	78
Carrera, Ricardo R.	82	Chong, Juang-Horng (JC)	54
Carrillo, Lilian.....	111	Chunyan, Dong	97
Cartmill, Donita L.....	73	Cihacek, Larry J.	78
Carver, Steve	106	Clark, David G.	60, 86
Casamali, Bruno.....	53	Clark, John R.	76, 80, 93, 95, 99, 101
Castaño-Tostado, Eduardo	52, 95	Clark, Matthew	71, 93
Castillo, Ana Maria	53	Clevinger, Elizabeth	80
Castle, William S.	65	Cline, John A.....	90, 107
Castro-Garcia, Sergio	88, 98	Cobb, William	97
Castro, Sarah	71	Cochran, Diana	76, 98
Cebert, Ernst	103	Coe, Michael	63
Cellon, Catherine	97	Cohan, Steven	56, 66
Cerven, Vasile	97, 110	Coker, Christine	55, 99
Chandler, Cameron	53, 78, 107	Coker, Christine E.....	92
Chang, Yao-Chien Alex.....	68	Cole, Janet C.	106
Chang, Hsueh-yuan.....	66	Collante, Werner R.....	97
Chan, Helen M.	93	Colle, Marivi	77
Chao, C. Thomas.....	68	Colley, Micaela	72, 76
Chaparro, José	72, 90, 105	Collins, Pamela	56, 106
Chappell, Matthew	54, 86	Colquhoun, Jed	69, 75, 76
Chase, Carlene	109	Colquhoun, Thomas A.	60, 86
Chatfield, James C.	104	Combe, Shannon	50
Chaudhary, Priyanka R.	61, 65	Conley, M. Elizabeth.....	94
Chavez, Dario J.....	72, 90	Conneway, Renee.....	62, 106, 108
Chen, Chunxian.....	79, 93	Contreras-Barragan, Beatriz A.....	98
Chen, Fei	85	Contreras, Carolina	61
Chen, Jianjun.....	71	Contreras, Ryan.....	84, 97
Chen, Jingzhen	52	Contreras, Samuel	77, 95, 98
Chen, Wen-tao.....	93	Cook, Amber	50
Chen, Yan	73, 76	Cooley, Cheryl	56
Chen, Yihua.....	55	Coolong, Timothy W.....	99, 103
Cheng, Chun-Huai	79	Cooper, Monica L.	96
Cheng, Lailiang.....	74	Coop, Leonard.....	113

Corcorran, Jessica	72	Dattilo, Adam J.	58
Coronado, Juan R. Franco.....	77	Daugovish, Oleg	53, 78, 107
Correll, James C.....	77	Davies, Frederick T.	92
Cotton, Corrie P.....	50, 53, 78, 97, 98, 99	Davies, Fred T.	80, 92, 99, 106
Countryman, Janie	60	Davis, Allen.....	56
Covarrubias, Giovanni E.....	97	Davis, Angela	101
Cowan, Jeremy.....	110	Davis, Audrey L.	69, 98
Cox, Douglas A.....	109	Davis, Jeanine M.....	64, 77, 89
Crabtree, Sheri B.....	76, 94	Davis, Thomas M.....	57, 107
Craker, Lyle E.	62	Davis, Tim.....	61, 105
Cramer, Christopher S.....	77, 86	Dawson, Julie	72
Crane, Jonathan H.	65, 68, 111	Day, Samuel	98
Crassweller, Robert M.	74	Dean, Deborah	90
Craver, Joshua	93	Dea, Sharon	75
Crawford, Lauren	87, 99	Debner, Abigail R.	61
Cregg, Bert	73, 89, 98, 108	Defoe, Phillip	111
Criley, Richard A.	47, 57	DeJong, Ted M.....	71
Crisosto, Carlos H.....	93, 99	del Rio, Hilda S.....	92
Crosby, Kevin M.....	67, 75, 112	Delate, Kathleen.....	63, 97
Crutchfield, Elizabeth	114	Deligoz, Ayse	83
Cruz-Crespo, E.....	73, 94	Deltsidis, Angelos I.....	60, 84
Cuda, James P.....	78	Demchak, K.	103
Cuello, Joel L.	69	Deng, Zhanao	65, 81, 97
D		Denney, Audrey.....	63
Da, Kedong	52, 81	Dennis, Jennifer	49, 69, 111
Dadson, Robert B.....	98	Denoyes, Beatrice	57, 107
Daigle, B.I.....	73	Derr, Jeffrey F.	54
Dai, Wenhao	51, 84, 85, 108	Dervishian, Geoffrey.....	59
Dal Santo, Silvia	85	DeVetter, Lisa Wasko	69
Daley, Cindy	63	De Vos, Neal E.	60, 68
Daley, James	58	DeYoung, Alan	112
Daley, Shawna.....	77, 81	Díaz-Pérez, Juan Carlos	52, 71
Dandekar, Abhaya M.	74	Di Bello, Patrick.....	110
Daniels, Alex B.....	67	Dickey, Dave	114
Dansereau, Blanche.....	49	Dittmar, Peter	78, 109
D'Aquila, Beth.....	92	Dobres, Michael	65
Darby, Heather	63	Doerflinger, Franziska C.	86
Dardick, Chris	59, 71	Dole, John M.....	54, 68, 71, 110, 111
Darnell, Rebecca L.....	53, 64, 69, 104	Doll, David.....	65
da Silva, Jorge	68	Domec, Jean-Christopher.....	75
		Domenghini, Cynthia	113

Dominguez, Leonel	90
Dong, Jinying	113
Donglin Zhang	113
Dong, Xiaoqing	95
dos Santos, Rayane Carneiro	95
Dossett, Michael	53, 59
Dove, Sue	66, 99
Downer, A. James	55, 97
Dragotakes, Alexander	55
Drakakaki, Georgia	98
Drost, Dan	92, 98, 104
Dufoo-Hurtado, Miguel David	52
Dunn, Bruce	55, 81, 108, 113
Dunwell, Winston C.	54, 56
du Toit, Lindsey	76, 77
DuToit, Elsa	50
Dutt, Manjul	51, 105
Dyrdahl-Young, Ruhiiyih	98
Dzakovich, Michael	50, 85
Dzewaltowski, David A.	113

E

e Silva, Lais Maia	95
Eakes, Donald J.	113
Easterling, Mona	51, 107
Eaton, Touria E.	109, 111
Ebel, Roland	63
Egilla, Jonathan N.	57
Ehlenfeldt, Mark	57
Einhorn, Todd	94, 95, 113
EL-Ansary, Diao O.	96
El-Hout, Nael	68
Elkins, Rachel B.	88
Elkner, Timothy E.	110
Elle, Ashley	104
Ellis, Deborah	89
Ellison, Dana	73
ELsyy, Mokhles A.	95
Emmett, Bryan	113
Eric Stafne	63
Ernest, Emmalea Garver	103

Ernst, Taunya	92
Esch, Clarice	73
Etxeberrria, Ed	60, 75
Eubanks, Emily	104
Evans, Bill	49
Evans, Edward	111
Evans, Jennifer	92
Evans, Katherine	71, 79, 93
Evans, Michael R.	50
Evans, Richard Y.	54
Evans, William B.	63, 75, 89, 97, 110

F

Faber, Ben	107
Fachinello, Jose	90
Falbel, Tanya G.	74
Fallahi, Esmaeil “Essie”	66, 104
Fang, Congbing	85
Fan, Lihua	74
Fan, Xiao-ming	94
Farag, Sheren Elsayed	93
Farish-Williford, Hannah	52, 81
Farnham, Mark	67, 89
Farnham, Mark W.	64
Farris, Jarrad	111
Fasoli, Marianna	85
Fass, Joseph	93
Fatima, Shazia	92
Fazio, Gennaro	90
Feibert, Erik B.G.	103
Feng, Chunda	77
Feng, Fengjuan	74
Fennimore, Steven A.	65, 87
Ferguson, Bradley	99
Ferguson, Louise	88, 98, 99
Fernandes, Martielle Batista	95
Fernandez, Gina Elizabeth	74
Fernandez, Rodney Thomas	56, 76, 98, 99, 100, 101, 108
Ferrarezi, Rhuanito Soranz	66, 84
Ferrari, Thomas	82

Ferriss, Terry	89, 106	Gady, Antoine	93
Ficklin, Stephen	79, 107	Gajanayake, Bandara	54, 82, 85
Fidelibus, Matthew W.	73, 88	Galinato, Suzette P.	73
Fields, Jeb S.	72, 94	Gallardo, R. Karina	111
Fillmore, Sherry	74	Gamet, Stephen J.	107
Fimbres-Fontes, Adan	72	Gandonou, Jean-Marc	111
Finlayson, Scott.....	109	Gao, Rongfu	82
Finn, Chad E.	53, 57, 59, 61, 90	Gao, Wei.....	94
Fisher, Paul R.	99	Gapper, Nigel	74
Fitzpatrick, George.....	102, 106	Garcia, M. Elena	97
Flack, Sarah.....	63	García-Paredes, J. Diego	94
Fleener, Ann	113	Garcia-Sanchez, Francisco	83
Flinn, Barry	52, 81	Garcia, Yessica	47, 50, 75
Fly, J. Mark	97	Garfinkel, Andrea R.	56
Folta, Kevin.....	61	Garner, Lauren C.....	50
Fonteno, William C.....	50, 72, 75, 77, 94, 106	Garton, Whitney	62
Foor, Ryan M.	105	Garzon, Jose G.....	57
Forge, Tom	107	Gasic, Ksenija	93, 109
Forney, Kevin.....	106	Gaskell, Mark.....	53
Fortenot, Kathryn	99	Gaxiola, Roberto	82
Francescato, P.....	74, 94	Geller, Joseph	59
Francis, David	63, 82, 85, 98	Gemma, Hiroshi	86
Franco, Jose G.....	112	Genc, Musa	83
Frank, Steven	54, 106	Geneve, Robert L.	50, 56, 76, 108
Frantz, Jonathan M.....	79	Geng, Fang	90, 113
Freeborn, John R.....	50	Gepts, Paul	70, 71
Freeman, Luke	95	Ghazanfar, Muhammad Usman	83
Fresnedo, Jonathan.....	93	Ghosh, Sibdas	107
Frett, Terrence	93	Gibeaut, David	113
Friedrich, Heather	55, 76, 95, 97	Gibson, Kevin D.	87
Fritts, Rob	94, 106, 112	Gilbert, Jessica L.....	86
Fritz, Vincent A.	58, 64, 75	Gil, Pilar M.	94
Fugimoto, Terrance	55	Gilbert, Lindsey	50
Fujiyama, Hideyasu	109	Gillett-Kaufman, Jennifer	78
Fulcher, Amy.....	54, 56, 76, 98, 106, 108	Gillman, eff	71
Furukawa, Hajime	74	Gioeli, Kenneth T.	78
Futsuki, Daisuke	57	Giovannoni, James	74
G		Giurcanu, Mihai	110
Gaches, Whitney	56	Glenna, Leland	113
Gadd, Teri.....	78, 87, 109	Glenn, David Michael	113
		Glover, Benjamin J.	111

Glozer, Kitren.....	98	Gugino, B.K.....	103
Gmitter, Fred.....	51, 65, 79, 93, 105	Guldan, Steve.....	65
Godfrey, Jessie M.....	98	Gunduz, Kazim.....	57
Goldman, Irwin L.....	72	Gunter, Chris.....	79, 106
Goldschmidt, Eliezer E.....	71	Gunter, Christopher C.....	57
Gomez, Celina.....	50, 65, 84	Güven, Dilek.....	58
Gomez-Lim, Miguel A.....	61	Guzman, Ivette.....	57, 61, 77
Gómez, Miguel.....	73	Gylling, Steven R.....	105
Gonzalez-Fuentes, Jose Antonio.....	54		
Grable, Carey.....	56	H	
Grabowski, Michelle.....	71	Ha, Injong.....	76, 95
Gradziel, Thomas.....	93	Ha, Tae Joung.....	56
Grajkowski, Ryan.....	62	Hadziabdic, Denita.....	58, 90
Granitz, Halley.....	111	Haff, Ronald.....	100
Grappadelli, Luca Corelli.....	83	Hale, Frank.....	54
Grauke, Larry J.....	75	Hall, Charles R.....	69, 79, 99, 111
Graves, William.....	50, 58, 110	Hamanaka, Daisuke.....	56
Gray, Dennis J.....	51, 85	Ham, Eunhye.....	54, 78
Greby, Ken.....	90	Hamilton, Susan.....	60
Grelen, Lori.....	95	Hamilton, Susan Wilson.....	91, 97
Grewell, David.....	50, 110	Hammack, Heather.....	73, 76, 109
Griffin, Jason J.....	56, 76	Hammar, Sue A.....	77
Griffis, Jr., John L.....	96, 111	Han, Chung-Su.....	55
Griffiths, Phillip.....	64	Han, Hangsup.....	96
Grijalva-Contreras, Raul L.....	72, 77, 78, 96	Han, Jeung Sul.....	54, 78
Grijalva-Durón, Saul A.....	72	Han, NaRae.....	92
Groover, Gordon.....	111	Han, Sang-Wook.....	57, 92
Grosser, Jude W.....	51, 65, 105	Han, Zhi-qiang.....	93
Grossman, Mara.....	50	Hancock, James F.....	57, 90
Gruber, Barrett.....	75	Handa, Avtar K.....	92
Grumet, Rebecca.....	77	Hanrahan, Ines.....	111
Grusak, Michael A.....	77	Hansen, Robert C.....	55
Gu, Eun-Hye.....	92	Hanson, Bradley D.....	65
Gu, Mengmeng.....	91, 96, 104, 110	Hanson, Kristen.....	74
Gu, Sanjun.....	53, 73, 98	Harbut, Rebecca.....	63, 69
Guan, Wenjing.....	75, 112	Hardner, Craig M.....	58, 71
Guan, Yingzhu.....	71, 93	Harkess, Richard L.....	68
Gubbuk, Hamide.....	58	Harmon, Carrie L.....	53
Guerra, Raul.....	82	Harshman, Julia.....	71
Guerrero, Kyle M.....	97	Hartman, Tim.....	93
Guevara-Figueroa, Teresita.....	52	Hartz, Timothy K.....	107

Harvey, Stephanie	71	Hoagland, Lori	76, 97
Hasenoehrl, Karen.....	90	Hochmuth, George J.	60
Hashem, Fawzy M.	50, 53, 61, 78, 97, 98, 99	Hodel, Donald R.	89, 90
Hasing, Tomas.....	58	Hoisington, Nick	73
Hassell, Richard L.....	58, 75, 77, 81, 95	Hokanson, Stan	68
Hatmaker, Annie	90	Holloway, Patricia.....	71
Hatterman-Valenti, Harlene	96, 107	Holness, Rickie	73, 98
Haubrich, Kyle.....	110	Hong, Chang-Ho	53, 58, 92
Hayden, Zachary D.	63	Hong, Dae-Ki	53
Hayes, Patrick	72	Hong, Jee-Hwa.....	51
Hayes, Ryan J.....	51, 90	Hong, Soon-sung.....	78
Haynes, Cynthia.....	49, 112	Hong, Su-Young.....	73, 96
Hayward, Pat.....	56	Honig, Josh	90
He, Chuanjiu	92	Hooker, Will E.	55, 92, 104
He, Dongxian	82	Hoover, Emily	61, 88, 113
He, Jianjun	59, 69	Hopkins, Rick	106
He, Wei.....	77	Horgan, Thomas E.	73, 79
Heckman, Jeff	105	Hoshino, Takanori.....	69
Heckman, Joseph R.....	56	Hossain, Macselynia	52
Heerema, Richard	98	Hossain, Md. Maksud M.....	56
Heinrich, Aaron.....	78	Howell, Anna D.	53, 78, 97, 107
Heleba, Debra	63	Howell, Nick	85
Hellier, Barbara	90	Howington, Scott	91
Henrich, James E.	90	Howland, Amanda.....	69
Henry, J. Michael	73	Hoying, Stephen A.	90
Henry, Mary Beth.....	102	Hu, Bizhen	85
Henry, Mary E.....	92, 96	Hu, Cuifeng.....	52
Hensley, David.....	63, 79	Hu, Jinguo	90
Heo, You.....	58	Huang, Danqiong	51
Hernandez-Aguilera, Juan N.....	73	Huang, Ying	85
Hernández, E. Israel Silva.....	110	Hubbard, Kristina.....	72
Hernandez-Ochoa, Ixchel M.....	80	Huber, Donald J.	74, 95
Hernández, Ricardo.....	55, 65, 84	Huffman, Vernon.....	107
Hershberger, Amanda J.	76	Hughes, Harrison	72
Hertog, Maarten	74	Hughes, Tim	74
Hesterberg, Dean.....	114	Hummer, Kim E.....	57, 59, 72
Hettiarachchi, Ganga M.	111	Hummer, Wade.....	84
Heuvel, Justine Vanden	59	Hur, O.S.	96
Hirst, Peter M.....	95, 113	Hustvedt, Gwendolyn	114
Hix, Raymond L.....	78	Hutchinson, Margaret Jesang.....	86
Ho, Thien	107, 110	Hutton, Mark	64

Hutton, Samuel F.....	82	Jayaprakasha, G.K.	61, 65, 111, 112
Hwang, Byung-Ho	57, 92	Jeannette, Karen	71, 104
Hwang, Haejun	76	Jeffery, Elizabeth.....	77
Hwang, Sunkyoung.....	76, 95	Jeliazkov, Valtcho D.	62, 73, 79, 81
Hyun, Soo Jung.....	66	Jeliazkova, Ekaterina	56, 79, 106
I		Jenderek, Maria	82
Ibrahim, Amir.....	75	Jeong, Jighan.....	79, 92
Iduhara, Miho.....	57	Jeong, Sun Jin	97
Iezzoni, Amy F.....	57, 71, 93, 107, 108, 109	Jett, Lewis	98
Ikeda, Takashi	54, 62	Jha, Ajay.....	92
In, Byung-Chun.....	74	Ji, Xiaoci	74
Inglis, Debra.....	73, 74, 110, 112	Jia, Baoguang.....	51
Ingram, Dewayne L.	80, 102, 108	Jiang, Cai-Zhong.....	50, 61
Ingrao, Adam.....	50	Jiang, Guixiong.....	107
Inoue, Eiichi.....	93	Jiang, Lijuan.....	52
Iqbal, Zafar.....	83	Jiang, Peng	55
Irani, Tracy A.	99	Jifon, John L.....	61, 68
Ireland, Shubha	50	Jin, Kyung-Ho.....	53
Irey, Michael	75	Jin, Xiaoling	51
Irvine, Aliah	112	Johnson, Andrew J.	65
Ishimaru, Megumi.....	95	Johnson, Charles E.....	62
Islam, Shahidul	56	Johnson, Daniel.....	50, 69
Israel, Glenn	92	Johnson, Gordon	81, 103
Isweiri, Hanan	92	Johnson, Paul G.	89
Itle, Rachel A.	57, 97	Johnson, Sacha	112
Iturrieta, Rodrigo.....	113	Jondle, Robert	101
Izumi, Hidemi	95	Jones, Lloyd	112
J		Jones, Samantha E.	55
Jackson, Brian	50, 54, 67, 72, 75, 77, 94, 100, 101, 106	Jones, Sarah E.	61
Jackson, Eric W.....	77	Jones, Stephen.....	72
Jackson, Jeremiah	50	Joshi, Ramesh	51, 72, 96
Jacob, Cristian.....	95, 98	Juarez-Lopez, P.	73
Jacobsen, Krista	50, 106	Juarez-Lopez, Porfirio.....	73, 94
Jahanzad, Emad.....	111	Juarez-Rosete, Cecilia R.	94
Jamieson, Andrew R.	90	Juarez-Rosete, C.R.....	73, 94
Jang, Yoon Ah	57	Juarez-Rosete, M.E.	73, 94
Janick, Jules	59, 61	Judd, Lesley A.....	75
Jaworski, Elizabeth A.....	60	Jung, Sook.....	79, 107
		Justice, Allison Hope	75
		Juvik, John A.....	60, 77
		Jyu, Byung-Sik.....	51

K

Kaiser, Clive.....	84, 113	Kim, Keum-Sun	54, 72, 74
Kak, Avinash	113	Kim, Ki Sun	50, 56, 68, 96
Kamal, Neel	77	Kim, Kyung-Hee	85
Kandel, Ramkrishna.....	77	Kim, Min Hee	93
Kang, In-Kyu	52	Kim, Mok-Jong	52
Kang, Jumsoon.....	53, 58, 92	Kim, Moo Jung	74
Kang, Shin-Mook.....	53	Kim, Seolah.....	72, 74
Kantor, George	86, 108	Kim, Seon Ae	51
Karlsson, Meriam.....	55	Kim, Seong-Sil.....	113
Karp, David	59, 61	Kim, SeungDeok.....	50, 54
Kaufman, Andrew	107, 112	Kim, Seung Heui.....	51
Kaufman, Leyla.....	107	Kim, Shin Young.....	68
Kawamura, Takuya	54	Kim, Si Un	92
Kelly, James D.	93	Kim, Soo-Hyung	79, 92, 109
Kennedy, Colleen	58	Kim, Soo-Ock	79
Kessler, Michael.....	50, 110	Kim, Su Jeong	56, 73, 96
Khachatrayn, Hayk	69, 111	Kim, Sun	66
Khairi, Tamadour N.	99	Kim, Sunggil	82
Khan, Ahmad Sattar	86	Kim, Taejung.....	50, 54
Khan, Muhammad Mumtaz	83	Kim, Young-Jin	53
Khan, Shamim A.K.U.	86	Kimball, Heather	77
Khatik, Nisha	96	King, Andrew R.	73
Kibet, L.C.....	61	King, Cynthia	107
Kibet, Leonard C.....	99	King, Jacqueline.....	90
Kietikul, Trisha	61	King, Stephen R.	112
Kijchavengku, T.	108	Kirk, Steven	53, 98
Kim, Daeil.....	51, 54, 72, 74	Kleinhenz, Matthew D.	85, 98, 113
Kim, Doo-Hwan.....	51	Klett, James E.	56, 108
Kim, Eun-Young	55	Kline, Wesley L.....	74, 110
Kim, Heedae	76, 95	Klingeman, William E.	54
Kim, Hye-Ji.....	93, 109	Kloppenburg, Jack	72
Kim, Ikjei	54, 92	Knab, Amy M.....	57
Kim, JaeJoon.....	55	Knepper, Caleb.....	93
Kim, Jiseon	55	Knerr, Larry D.....	101
Kim, Jonghwan	96	Knox, Gary.....	54, 81
Kim, Jongkee	57, 92	Kobayashi, Haruyuki	97
Kim, Jongyun.....	66, 67	Kobayashi, Hideka	96
Kim, Ju-Hee	51	Kobayashi, Kent.....	53, 54, 81, 82, 84, 97, 108, 111
Kim, JuHyung	50, 54	Koc, Ismail	83, 84, 108
		Koda, Hitomi.....	97
		Koeser, Andrew	50, 93, 106

Kohanbash, David.....	86, 87, 108	Lada, Raj.....	81
Koike, Steven T.....	77	Lada, Rajasekaran.....	52
Kommein, Shreyas.....	61	Lake, Chris.....	63
Konkol, Joshua L.....	72	Lamberts, Mary.....	106
Kopsell, David.....	50, 80, 84, 97, 112	Laminack, Kirk.....	73
Kopsell, Dean.....	55, 60, 64, 65, 82	Lamont, Jr. William J.....	80, 99
Korir, Robert.....	99	Lamour, Kurt.....	77
Kornegay, Julia L.....	79	Langellotto, Gail.....	71
Korsvold, Kamilla.....	61	Langlois, Scott.....	54
Koselka, Tony.....	113	Larman, Michael.....	105
Koski, Anthony J.....	56, 108	Larson, Steven R.....	89
Koski, Ronda.....	56	Lavelly, E.K.....	103
Kosta, Kathleen.....	107	Lavery, Sierra.....	97
Kovaleski, Alisson Pacheco.....	104	Lavis, Catherine C.....	56
Kraikittikun, Patty.....	56	Lavis, Cathie.....	63
Krarup, Christian.....	95, 98	Lawson, Vince.....	85
Kreis, Rachel A.....	94	Layne, Desmond R.....	72, 79
Krishnan, Sarada.....	88	Lea-Cox, John D.....	56, 64, 66, 67, 83, 86, 87, 99, 101, 108
Kritz, Karen.....	110	LeBude, Anthony.....	54
Kroggel, Mark A.....	52, 81	Lee, A-Young.....	51, 113
Krueger, William H.....	61	Lee, Chiwon W.....	57, 78, 81
Kuban, Jacob.....	97	Lee, Hee-Ju.....	57
Kubota, Chieri.....	50, 52, 55, 65, 81	Lee, Ho-Sang.....	51, 113
Kudo, Keita.....	82	Lee, Hyun-Ju.....	78
Ku, Kang Mo.....	77	Lee, Jaehoon.....	74
Kumar, Prem.....	75	Lee, Jinsu.....	52, 74, 95
Kumi, Yamanaka.....	54	Lee, Jinwook.....	52, 74, 86
Kuo, Mei-Lin.....	57	Lee, Jongtae.....	76, 95
Kuo, Yi-Ai.....	68	Lee, JongWon.....	50, 54
Kurtural, S. Kaan.....	59	Lee, Jungmin.....	78
Kusakabe, Ayako.....	92, 98, 107	Lee, Jun Gu.....	57
Kweon, Hun-Joong.....	52	Lee, Jun Seok.....	54, 78
Kwon, Joon-Kook.....	55	Lee, KiYeol.....	50, 54
Kwon, Min Hyeong.....	57	Lee, Ki Youl.....	54, 92
Kwon, Oh-Keun.....	73, 96	Lee, Kwan-Suk.....	51, 113
Kwon, Soon-Jae.....	90	Lee, Kyeongcheol.....	96
Kwon, Yeu Seok.....	54, 92	Lee, Kyung-Tea.....	96
Kwon, Yong-Sham.....	51	Lee, Kyung-Ui.....	51
		Lee, Luke O.....	78
		Lee, Richard.....	105
L			
LaBonte, Don.....	64, 95		

Lee, Sang Gyu.....	57	Lin, Shu-I.....	57
Lee, Sang Mi.....	97, 112	Lin, Wei-Kuang.....	97
Lee, Seung Youn.....	50, 68	Lineberger, R. Daniel.....	105
Lee, Sung-Hee.....	54, 92	Ling, Peter.....	79
Lee, Sunyeong.....	76	Lippet-Faczak, April.....	105
Lee, Sun Yi.....	55	Little, Holly.....	49, 58
Lee, Sunyoung.....	95	Liu, Guang.....	54
Lee, Taein.....	79	Liu, H.....	110
Lee, Young-su.....	78	Liu, Min.....	51
Leep, Daniel.....	94, 106, 112	Liu, Qiang.....	52
Legendre, Reeve.....	64	Liu, Yizao.....	111
Leinfelder-Miles, Michelle.....	63	Lo, Hsiao-Feng.....	57
Leisso, Rachel.....	60, 74	Loayza, Francisco.....	66
LeMieux, Corbin.....	76	Lobo, Ramiro.....	99
Leonas, Karen.....	110	Lobos, Gustavo.....	66
Leonhardt, Kenneth.....	65, 93	Lockhart, Ben E.....	62
Leskovar, Daniel.....	75, 82, 103, 109	Loehrlein, Marietta.....	56, 79
Lester, Gene E.....	61, 112	Loescher, Wayne H.....	93
Li, Changzhu.....	52	Lohr, Virginia I.....	60, 105
Li, Guodong.....	114	Long, Hong-xu.....	93
Li, Jiefa.....	59, 69, 85	Long, Hongxu.....	51, 72, 77, 94, 107
Li, Li.....	74	Long, Lynn E.....	52
Li, Mingjun.....	74	Long, Randy.....	53
Li, Peiwan.....	52	López-Carvajal, Arturo.....	72, 77, 96
Li, Pingfang.....	54	Lopez, Johnny.....	106
Li, Tongyin.....	76	Lopez, Roberto G.....	68
Li, XiHong.....	74	Lou, Yusui.....	85
Li, Xinxin.....	93, 109	Louws, Frank J.....	104
Li, Zhihui.....	51, 52, 97, 113	Louzada, Eliezer.....	92
Liang, Guolu.....	93	Lovatt, Carol.....	76, 101
Liao, Hong.....	109	Lovell, Sarah T.....	50, 93
Lichtenberg, Erik.....	67, 86, 87	Lowe, Jeremiah.....	76, 94
Liedl, Barbara E.....	63	Lowry, Carolyn.....	76, 97
Lieth, Heiner.....	54	Lu, Huangjun.....	77
Lietze, Verena.....	78	Luby, Claire H.....	72
Lila, Mary A.....	57	Luby, James.....	71, 93, 109, 111
Lilliston, Ben.....	72	Luo, Mingliang.....	52
Lim, Sooyeon.....	57, 92	Luo, Yaguang.....	112
Lim, Tae Jo.....	55	Luzio, Gary.....	75
Lin, Dawei.....	93	Lyons, Robert E.....	60, 61, 113
Lin, Jia-Ying.....	57		

M

Ma, Guoying	74	Masiunas, John B.	97
Ma, Shen	64	Massa, Gioia D.	60, 62, 84
Ma, Yingmei.....	89	Masterson, Kevin	113
MacDonald, Joanne E.	73	Mathers, Hannah	112
MacDonald, Mason	52	Mathey, Megan M.	57, 90
Machado, Rui M.A.	53	Matlock, Marty	95
Machuca-Sanchez, Maria Luisa.....	73	Matsuo, Hiroshi.....	95
Macias-Duarte, Ruben	72, 77, 96	Matsusita, Kohei	54
MacLean, Dan	52	Mattheis, James	60, 74, 86
Macnish, Andrew J.....	61	Matthews, Jennifer	105
Madbouly, Samy	50, 110	Matthews, Mark	81, 96
Mahato, Tilak	74, 95, 107	Mattson, Neil.....	83, 110
Mahoney, Lise	57, 107	Maughan, Tiffany	104
Main, Dorrie.....	79, 107	May, Brandon.....	94
Main, Jeffrey L.....	75, 95	May, Eric	61
Majsztrik, John.....	67, 87, 99, 100	May, Jeannine	92
Makus, Donald J.	75, 98	Mayer, Newton Alex	113
Malik, Aman Ullah.....	86	Maynard, Elizabeth T.	94
Malik, Babar	79	Mays, Neal	97
Malladi, Anish.....	49, 84, 104	Mazourek, Michael	67
Mangandi, Jozer	103	McAfee, Jason.....	76, 97
Manners, Malcolm M.....	111	McAuslane, Heather	77
Mansouri, Saara	77	McCabe, Kenneth	50, 110
Manthey, John A.	75	McCall, Ingram	68
Marcial, Edgardo Zalazar.....	110	McCallum, Susan	72
Marini, Rich	79	McCarthy, Michael	100
Marini, R.P.	90, 103	McCloskey, William B.	50
Marino, Silvia R.....	57	McCluskey, Cathlen	76
Marmor, Frederick	94, 112	McConachie, Ian	58
Marshall, Sam	106	McCracken, Vicki	111
Marsh, Lurline E.	50, 61, 63, 97	McCreight, James D.....	64
Martin, Edward C.....	107	McDonald, Ty G.	111
Martinez-Garcia, Pedro J.	93	McElrone, Andrew J.	108
Martínez-Peniche, Ramón Á lvar	52	McFerson, James R.....	71, 111
Martin, Jeffrey T.....	63, 74	McGiffen, Milton E.....	47, 58, 63, 64, 76, 85, 89, 91, 103, 114
Martin, Robert.....	69	McGranahan, Gale H.	59
Martin, Sabine	111	McGregor, Cecilia.....	81
Martin, Todd.....	86, 87	McKee, John	79
Masiunas, John.....	71	McKenney, Cynthia B.....	104
		McLaughlin, Mike	97

McMahon, Elizabeth	113	Miyazoe, Mikio	78
McMahon, Margaret J.....	84, 108	Mizobutsi, Edson Hiydu	95
McMahon, Robert W.....	55	Mizobutsi, Gisele	95
McQueen, John	63	Mizobutsi, Gisele Polete	95
McRoberts, D. Neil	77	Mochizuki, Maren.....	82
McSorley, Robert	98	Mockler, Todd	53
Meagy, Md J.....	111	Mock, Tyler J.	73
Meier, Erica Jane.....	114	Moggia, Claudia.....	66
Mejia, Luis E.....	99	Molnar, Thomas J.....	65, 90
Melendez, Meredith	105	Monfort, Amparo	107
Melgar, Juan Carlos	82, 92, 93, 98, 107	Montague, D. Thyne.....	104
Mello, Simone da Costa	86	Montas, Wanda.....	65
Melo, Anderson Martins	66	Montoya, John.....	114
Méndez-Aguilar, María de Jesús	63	Mookerjee, Sonali	57
Meneghelli, Luigi.....	97	Moon, Ji-Hye	97
Mentreddy, Rao S.....	63, 103	Moon, Jinseong	76, 95
Mercado-Silva, Edmundo	52, 95	Moon, Kyung Hwan.....	79
Merhaut, Donald J.....	85, 114	Moore, Gloria A.	52
Merwin, Ian A.	59	Moore, Jonathan.....	62
Meyer, Mary Hockenberry	56, 71	Moore, Kimberly.....	60
Miao, He	97	Moore-Kucera, J.	74
Michaels, Thomas E.....	72	Moorman, Christopher	106
Michele Scheiber	65	Morandi, Brunella	83
Michelmore, Richard W.....	51	Moran, Renae	90, 113
Micka, Ana	72	Morris, Kerry A.....	90
Mikkelsen, Robert.....	91	Morris, Wythe	64
Miles, Carol A.....	73, 74, 81, 90, 110, 112	Morrow, Robert C.	65
Miles, John A.	98	Mortaz, Morad	72
Miller, Diane Doud	66, 74, 94	Morton, Frank	72
Miller, William B.	86	Motomura, Sharon	96
Milliken, George	113	Motsenbocker, Carl	63, 89, 102
Milliron, Luke K.	61	Mou, Beiquan.....	47, 79, 90, 93
Millner, Patricia	53, 99	Moynihn, Ken	100
Min, Byeonggyu	76, 95	Moyseenko, Jennifer	85
Miranda-Sazo, Mario	90	Muehlbauer, Megan	65, 90
Mitcham, Beth.....	96	Mueller, Lukas	79
Mitcham, Elizabeth J.	61	Muniappan, Rangaswamy	67
Mitchell, Cary A.....	50, 65, 99	Muniruzzaman, Syed	50
Mittman, Mike	107	Murgel, John	61
Miyanaga, Masaya	54	Murphy, Kevin	97
Miyasaka, Susan C.....	77, 96	Muse, Barbara D.	52

Muse, Ronald R.	52	Nham, Ngoc	61
Myers, James R.	72	Nickum, Mark	58
Myrteza, Haxhire	76	Nicolai, Bart	74
N			
Nabe, Takeshi	57	Niederholzer, Franz	94
Nackley, Lloyd	79, 92	Nieman, David C.	57
Nair, Ajay	63, 85, 103, 106	Niemiera, Alexander X.	94
Nakayama, Masayoshi	62	Nienhuis, James	82
Nambuthiri, Susmitha	50, 56, 76, 108	Nietsche, Silvia	65, 68
Nam, Chun Woo	57	Nitta, Yoko	57
Nam, Jung-Hwan	56, 73, 96	Nitzsche, Peter	71, 79
Nandwani, Dilip	51, 53, 72, 96	Nitzsche, Peter J.	74
Nan, Jiang	51	Niu, Fanghua	97
Nanos, George D.	74	Niu, Genhua	50, 56, 68, 76, 82, 106, 108, 112
Narciso, Cody	75	Nock, Cathrine	58
Narciso, Jan	75, 78	Nock, Jacqueline F.	86
Narukami, Manabu	57	Noel, Bryon J.	107
Natwick, Eric T.	64	Noguchi, Yuji	57
Navarro, Felix	77	Noh, Heesun	53, 73, 96
Navasca, Dioreme	112	Nolte, Kurt D.	55, 56, 78, 98, 105
Navazio, John P.	72, 76	Norimura, Naoko	56
Nawaz, Muhammad Azher	79	Norrie, Jeffrey	66, 69, 73, 86, 91, 100, 102
Neal, Joseph C.	54	Nuessly, Gregg	77
Needham, Doug	106	Nunes, Cecilia	75
Needham, Douglas C.	79	Nunez, Gerardo H.	53, 69
Neff, Michael W.	79, 82, 101	Nunez, Joe	76
Neff, Victoria	50	Nyberg, April	51
Neilsen, Denise	107	Nyirakabibi, Isabelle	57
Neilsen, Gerry	107	Nzokou, Pascal	83, 108
Neily, Will	73, 86	O	
Nelson, Jacob A.	62	O'Callaghan, Angela M.	57
Nelson, Paul V.	114	O'Connell, N.V.	75
Nelson, Scot	96	O'Connor, Alison Stoven	56, 108
NeSmith, Scott	61	O'Neill, Barbara	105
Newall, W.C.	72	Obenland, David	80, 96, 100
Newman, Debra	76	Ochoa, Kathleen	55
Newman, Julie	99	Ogden, Erin	72
Newman, Steven Earl	73, 76, 108, 109	Ogundiwin, Ebenezer A.	93
Ngouajio, Mathieu	63, 77, 98, 108, 110	Ogututu, Rose	57
Nguyen, Nhi	75	Oh, Myung-Min	55
		Oh, Sung-Il	54

Oh, Wook	55	Paparozzi, Ellen T.	71, 94
Oh, Youngjae.....	54, 72, 74	Paranhos, Lucas	110
Oki, Lorence R.....	99	Paret, Mathews L.	54
Okie, W.R.....	90, 93	Parfitt, Dan	93, 99
Olmstead, James W.	53, 57, 61, 63, 69, 86, 88, 95, 97	Park, Bong-Ju.....	55
Olmstead, Mercy A.	58, 59, 79, 113	Park, Hee-Jhun	96
Olsen, Jeff	71	Park, In Sook.....	55
Olsen, Richard T.	59, 97	Park, Johnny.....	113
Olson, Brittany K.....	96	Park, Jong Kyun.....	54, 78
Olson, Stephen M.....	53, 98	Park, Ju-hyun	50
Onuaguluchi, Demitrius	50	Park, Kyoung-Sub.....	55
Oraguzie, Nnadozie.....	79	Park, Moo-Yong	52
Orcheski, Benjamin.....	71, 93	Park, Sin-Ae.....	51, 113
Orr, David	104, 106	Park, Younghoon.....	92
Orzolek, Mike	89	Pastalka, Tomas.....	107
Osborne, James	97	Patel-Campillo, Anouk.....	113
Osorio, Luis F.....	90, 103	Patil, Bhimanagouda S.....	61, 65, 82, 103, 111, 112
Osuna, Pedro	50, 68	Patterson, Bradley	50
Oswalt, Chris.....	76	Patterson, Sara E.	74
Othman, Yahia.....	93	Pattison, Jeremy	80, 90
Overholt, William A.....	78	Payne, Alan	86
Owen, James S.	66, 85, 93, 99, 101	Peace, Cameron.....	58, 68, 71, 79, 93, 107
Owen, W. Garrett	50, 77, 106	Pearson, Thomas	100
Owings, Allen D.....	65, 73, 76, 89	Peck, Gregory Michael	111
Owino, Willis Omondi	86, 95	Pee, Mary M.....	99
Özkan, Burhan	111	Pemberton, H. Brent	76
Ozores-Hampton, Monica.....	49, 58, 101, 103	Pereira, Marlon C.T.....	65, 68
P		Peres, Natalia A.....	58
Padmanabhan, Aarthi	112	Pérez, Alma R. Solís	110
Paek, Kee Yoeup	50, 54	Perez, Juan Carlos Diaz	64
Pak, Chun Ho	57	Perez, Kauahi	97
Palma, Marco	103	Perez, Patricia	73, 98
Palta, Jiwan P.	65, 77, 82	Perkins-Veazie, Penelope.....	57, 61, 71, 74, 81, 95, 106
Panen, Murali.....	84	Pervez, Muhammad Aslam	83
Panicker, Girish Kumar.....	63	Peterson, Bryan J.	58
Panjtandoust, Mahmoud	54	Peterson, Gary	50
Pannkuk, Tim	99	Peterson, John	88
Panter, Karen.....	56, 106	Peterson, Mary	53
Panthee, Dilip.....	82	Petracek, Peter D.....	94, 112
		Pezzotti, Mario	85
		Pfeiffer, Anne	75

Phelps, Ryan.....	76	Racsco, Jozsef.....	74, 82, 94, 112
Phene, C.J.....	98	Radovich, Theodore J.K.....	108, 111
Phene, R.C.	98	Radunic, Mira	52
Phillips, Nathan.....	84	Raid, Richard	77
Picha, David H.....	95	Raines, Doug.....	71
Pienaar, Johan	94, 106, 112	Rainey, Ronald L.	95
Pierzynski, Gary M.	111	Raithore, Smita	75
Pillai, Suresh D	112	Rallo, Luis.....	88
Pinares, Ania	68	Ramaswamy, Sonny	48, 49
Pineda, Joel	53	Ramirez-Godoy, Augusto.....	82
Piner, Abbey E.	55, 92, 104	Ramirez-Sanchez, Maricruz.....	95
Pirani, Ali	107	Ramos, Humberto	52
Pisani, Cristina	52	Ramsey, Craig	73, 76, 109
Pitchay, Dharmalingam.....	64, 83, 101	Rana, Jat	72
Pitts, Emily.....	104	Randall, Wesley	68, 84
Plante, Amanda	97	Rankin, Aimee A.....	104
Pliakoni, Eleni D.....	60, 74, 95	Ranney, Thomas.....	67, 84
Ploegg, Antoon.....	53	Ranwala, Dayan	81
Ploetz, Randy C.	72	Rao, Jing-Ping.....	95
Plotto, Anne.....	60, 75	Rathinasabapathi, Bala.....	81
Podoll, Theresa.....	72	Ratnayaka, Harish	50
Polanin, Nicholas	105	Ravishankar, Sadhana	98
Poling, Barclay	79, 80	Ray, Dennis	50, 82
Pomper, Kirk William	76, 85, 94, 96, 102	Rayman, Mike.....	97
Pooler, Margaret.....	97	Raza, Syed Ali.....	86
Popp, Jennie H.	76, 95	Read, Paul E.....	99, 79, 107
Postman, J.	51	Reddy, K.R.....	54, 82
Powell, Arlie	49	Reed, David W.	61, 63, 105
Prakash, Anuradha	56, 74	Reeve, Alison L.....	78
Pratt, Rich	88	Reginato, Gabino M.....	90
Preece, John	59, 99, 102	Reid, Michael S.....	50
Pugliese, Paul	104	Reighard, Gregory L.	93, 113
Pyne, Robert.....	73	Reinbott, Tim	53
Q		Reis, Sidnei	68
Qi, Lingqiao	111	Ren, Runsheng	54
Qian, Yaling	92	Ren, Shuxin.....	54
Quiring, Reg.....	62	Renick, Kaylee	56, 105
R		Renner, Karen A.....	87
Rabin, Jack.....	74	Restrepo-Diaz, Hermann.....	82
		Retamales, Jorge	66
		Retemales, Julio	106

Reynolds, Dana R.	79	Rosyara, Umesh	71, 90, 93
Reynoso-Camacho, Rosalía	52, 95	Rothleutner, Joseph	60
Rhie, Yong Ha	50, 68	Rowe, Dennis	56, 73, 79, 106
Rhodus, Tim	101, 108	Rowland, Lisa J.	57, 72
Rho, Hyungmin	109	Rowland, Naomi	76
Ribeiro, Maycon Diego	66	Rozum, Jane	56
Richards, Christopher	72	Ru, Sushan	79
Rihn, Alicia L.	79	Rudell, David R.	60, 71, 74, 86, 93
Ríos-Hernández, Ana Luisa	52	Rudolph, Rachel	75
Riquelme, Cristián	90	Rupp, Paul	92
Ristau, Julie	72	Ruter, John M.	86, 87, 97
Ristvey, Andrew	56, 66	Rutzke, Michael	74
Ritenour, Mark A.	52	Ryu, Young Sook	66
Rivera, Leonardo D.	99		
Ro, Chiwoong	76	S	
Robacker, Carol D.	76	Saavedra-Arriaga, Ana Devi	52
Robbertse, P.J.	50	Saavedra, Monica	67, 87
Robbins, James A.	96, 104	Sabanadzovic, Nina Abou-Ghanem	69
Robbins, Matthew D.	89	Sabanadzovic, Sead	69
Robbins, M. LeRon	68, 71	Sabatino, Leo	81
Roberson, William R.	76	Sadder, Monther	52, 54, 77
Roberts, Philip A.	76	Safley, Charles	111
Robinson, Carolyn W.	113	Sakayori, Takumi	54
Robinson, M.L.	57	Salame-Donoso, Teresa	80
Robinson, Carolyn	60	Salazar, Brent	81
Robinson, Terence Lee	88, 90	Salazar-Jara, Fredi I.	94
Robles-Contreras, Fabian	72, 77, 78, 96	Salazar, Rene	72
Rock, Channah M.	55, 56	Saleem, Muhammad	54
Rodriguez, German	76	Salgado, Alejandra A.	93
Rodriguez-Armenta, Hilda Patricia	57	Salinas, Natalia R.	57
Rodríguez-Lerma, Gisela K.	52	Salvatierra, Juanpablo	72
Rodriguez-Lynn, Rebekah	62	Samons, Vince	91
Rohwer, Charles L.	58, 64, 75	Sams, Carl E.	49, 55, 64, 65, 79, 82, 111
Rom, Curt R.	55, 76, 95, 97	Samtani, Jayesh	91
Romero-Conde, Antonia	107	Sanchez-Canro, Diego-Leonardo	82
Roose, Mikeal L.	105	Sanchez, Charles A.	82
Roozen, Jonathan	90	Sánchez, Eduardo Fuentes	110
Rosecrance, Richard	102	Sandefur, Paul	93
Rosecrance, Richard C.	61	Sandoval, Guadalupe	88
Rosen, Carl J.	58	Sandoya, German	51
Ross, Matthew	113	Sanhueza, Sergio	94

Santos, Belinski.....	80	Seo, Hyun-Taek.....	53
Santos, Bielinski M.....	80, 98	Shackel, Kenneth	54, 96
Santos, Daffine Oliveira.....	95	Shaheen, Muhammad Rashid.....	83
Sargent, Daniel.....	57, 107	Shahid, Muhammad A.	83
Sargent, Steven.....	95	Shahid, Muhammad Adnan.....	83
Sater, Chris	60	Shail, Joseph W.	76, 97
Saunders, Lamont	103	Shankle, Mark	54, 82
Savin, Mary	97	Shanley, R. Andrew.....	57
Saxton, Arnold	110	Sharma, Manan	53
Schabow, Justin E.	65, 82	Sharma, Sat Pal	75
Schaffer, Bruce.....	61, 72, 94	Sharma, Supriya.....	107
Scheiber, Michele.....	65	Shaw, David A.	73
Schermann, Michele A.....	111	Shaw, Magee	108
Schiappacasse, Flavia	54	Shearer, Judy	78
Schiavon, Marco	73	Shelton, Adrienne.....	72
Schipper, Dale J.	72	Sherk, Julieta T.....	55, 79, 92, 104
Schlegel, Vicki L.....	79	Sherman, Joshua	98
Schmalzel, Carl L.....	50	Sherony, Caroline.....	58
Schmitz, Cari.....	71, 93	Shi, Kun	51
Schmitz, Daniel J.	113	Shi, Wei	114
Schneider, Sally	79	Shibairo, Solomon Igosangwa	86
Schoneman, R.	98	Shin, Hyun-Moo	53, 58, 92
Schrader, James.....	50, 110	Shin, Hyunsuk.....	54, 72, 74
Schreiner, R. Paul.....	64, 69, 78, 80	Shinjo, Anna.....	113
Schuch, Ursula K.	74, 95, 107	Shintaku, Michael	77, 96
Schumann, Arnold W.	76, 80	Shishkov, Laurel	86
Schupp, James R.	113	Shock, Clinton C.....	71, 103, 104
Schwankl, L.J.....	75	Shoemaker, Candice.....	51, 56, 112, 113
Schweigkofler, Wolfgang.....	107	Short, Kathryn.....	50
Schwieterman, Michael L.	60, 86	Short, Stephanie	113
Scoggins, Holly L.	50	Showell, Michael S.	55
Scorza, Ralph	59, 71	Shreckhise, Jacob H.....	94
Scott, John W.	82	Siciliano, Paul	47
Sea, Sokrith	74	Sidhu, Harwinder S.....	52
Seals, Cody	84	Siemens, Mark C.....	78
Seavert, Clark F.....	113	Silva, Dilma Daniela	85
Sebolt, Audrey.....	71	Silva, Erin	60, 75, 76, 91
Segura, Paloma	77	Silverman, aul	112
Sehloff, Joel Z.....	62	Silverman, Paul	94
Selvaraj, Abira.....	76, 91	Simko, Ivan	90
Sembera, Jennifer.....	107, 114	Simmons, Adam	55

Simmons, Gregory S.....	96	Stafne, Richelle.....	57, 63, 71
Simmons, Hannah.....	76	Stamps, Terrell.....	98
Simonne, Amarat.....	66	Stanley, Craig.....	80, 98
Simon, Philipp W.....	76	Stanphill, Stephen.....	81
Simpson, Catherine.....	112	Starry, Olyssa.....	66, 84
Sims, Charles A.....	60, 112	Staub, Jack E.....	89
Sim, Sung-Chur.....	82	Stearns, Tom.....	72
Singh, Narinder.....	77	Steele, Caiti.....	93
Singh, Zora.....	86	Steenwerth, Kerri.....	80
Sirianni, Rebecca.....	59	Stegmeir, Travis.....	71, 93
Sirriner, Robert.....	97	Steinberg, Susan.....	106
Skinkis, Patricia A.....	63, 69, 78, 97	Stein, Rebecca E.....	111
Sligh, Michael.....	72	Stewart, J. Ryan.....	50, 58, 93
Sloan, Crofton.....	73, 79	Stewart, Philip.....	57
Smilanick, Joseph.....	78	Stone, Alex.....	58
Smith, Bianca.....	112	Stone, Alexandra.....	62, 63, 78, 110
Smith, Brett D.....	97	Stone, Martin.....	71, 73, 76
Smith, Dana.....	55	Stoven, Heather M.....	93
Smith, Donald E.....	74	Stover, Ed.....	52, 99
Smith, Erick.....	52	Straley, Elizabeth.....	77
Smith, Harley.....	113	Strang, John G.....	76
Smith, Rhonda J.....	96	Strik, Bernadine.....	79
Smith, Richard F.....	87, 107, 114	Stringer, Stephen.....	57
Smith, Samantha.....	52, 81	Struve, Daniel K.....	56, 108
Snyder, William.....	110	Sturman, Peter.....	104
Sobral, Raquel Rodrigues Soares.....	95	Stutte, Gary.....	81
Sohn, Hwang-Bae.....	73, 96	Subramani, Jay.....	107
Son, In-Chang.....	72, 74	Sugar, David.....	52, 66
Son, Ki-Cheol.....	51, 113	Sugimoto, Itsumi.....	82
Song, Jun.....	74, 100	Suh, Jeongmin.....	53, 58, 92
Song, Min-Jeong.....	55	Suh, Jong Taek.....	56
Song, Yang-Yik.....	52	Sullivan, Joe.....	56
Song, Zhibo.....	51	Summers, Grace.....	73, 98
Sosinski, Bryon.....	110	Sun, Jun.....	85
Spalholz, Hans.....	50	Sun, Youping.....	50, 52, 56, 68, 76, 106, 108
Spann, Timothy M.....	76	Suslow, Karen.....	107
Sprague, Christy L.....	87	Subbarao, Krishna V.....	51
Srinivasan, Chinnathambi.....	71		
Srinivasan, Gowrishankar.....	50, 110	T	
St. Hilaire, Rolston.....	93, 98	Takeda, Fumiomi.....	69
Stafne, Eric.....	63, 73, 113	Takele, Eta.....	91

Takeuchi, Tracey Emmerick	55	Tzanetakakis, Ioannis	69, 107, 110
Tan, Xiao-Feng	51, 72, 107	U	
Tan, Yunde.....	77	Uchanski, Mark.....	101, 75
Tanaka, Fumihiko	56	Uchino, Toshitaka	56
Tang, Jing.....	94	Uckoo, Ram M.....	112
Tang, Xiaorong	51	Uckoo, Rammohan	84, 89, 91
Tarara, Julie M.	113	Um, Young Chul	57
Taylor, Erin C.....	87	Uno, Yuichi	57, 82, 97
Taylor, Kurt	73, 98	V	
Taylor, Linda L.....	94	Vaiciunas, Jennifer	90
Taylor, Matthew D.	76, 94, 110	Valdez, Luis Alonso	53
Teetor, Valerie H.	50	Valenzuela-Ruiz, Manuel de Jesús.....	72, 77, 78, 96
Teh, Soon Li.....	78	Vallejos, Eduardo C.	74
Teo, Shuan Hao	53	Vallejo, Veronica	92
Tepe, Emily	113	van de Weg, Eric	57, 71, 90, 107
Termizi, Ainnantul Ahmad.....	58	van Deynze, Allen	82
Testezlaf, Roberto	66	van Dijk, T.....	107
Thekke-Veetil, Thanuja	69	van Iersel, Marc	60, 62, 66, 68, 83, 86, 87, 99, 105
Theroux, Marc.....	62	Van Zyl, Sonet.....	78
Thomas, Christina.....	55	Vance, Amanda J.	78
Thomas, Paul.....	60, 66, 79, 86	VanDerZanden, Ann Marie	97, 105
Thorp, Kelly	50	VanLeeuwen, Dawn	98
Threlfall, Renee T.	95	Vanzie-Canton, Susana D.....	65
Thull, John R.....	64	Varela, Lucia G.	96
Tian, Wenlan	50	Vargas, Ana I.....	72
Tillman, John	113	Vargas, Jose M. Gomez.....	87
Tong, Jonathan	52	Vashisth, Tripti	104
Tornielli, Giovanni Battista.....	85	Vázquez-Barrios, Ma Estela	52, 95
Torres-Robles, Hostilio	52	Vázquez-Celestino, Dalia	52, 95
Towers, Victoria	78	Vega, Sandra E.	77
Tracy, William F.....	72	Venburg, Gregory	94, 112
Trader, Brian	79, 82, 112	Vendrame, Wagner	50, 65, 67, 68, 95
Traub, Jesse	93	Vercillo, Diana	50, 85
Treadwell, Danielle	58	Vergara-Pineda, Santiago	52
Trent, Mark	90	Verlinden, Sven	62, 106, 108
Trigiano, Robert N.	58, 60, 90	Verma, Sujeet	71, 109
Tshisaphungo, T.	50	Vescera, Mina.....	53
Tsukazaki, Morihiro	56	Villordon, Arthur	111
Tsuruta, Hiroki	57		
Tuck, Richard.....	62		
Turner, Sam	97		

Vitoreli, Anne	53	Warren, Stuart	81
Vodak, Mark	56	Warren, Stuart L.	56, 76
Vodovotz, Yael	113	Waters, Tim	76
Volder, Astrid	73, 75, 79, 112	Watkins, Christopher B.	60, 74, 86, 95
Volk, Gayle.....	72	Wattoo, Khalid Saeed.....	79
Vyas, Priyanka.....	51	Weaver, Geoffrey	68, 84
W		Weber, Hannah	76
Wadl, Phillip A.	58, 90	Webster, Theresa	107
Wahb-Allah, Mahmoud	52, 54, 77	Wechter, Patrick	58
Walker, Stephanie	75, 88, 99	Wedde, Ashlyn E.	96
Wallace, Russell W.	74	Weebadde, Cholani Kumari	108, 109
Wallach, Bret.....	113	Weeda, Sarah.....	54
Wall, Gretchen L.	111	Wehner, Todd C.....	64
Walsh, Shane	62	Wei, Xu	93
Wander, Michelle	110	Weidman, Robert F.....	68, 110
Wang, Bo.....	59, 69, 85	Weieneth, Laura	85
Wang, Changzheng	96	Weiss, Micah J.	97
Wang, Guangyao (Sam)	50	Welk, Gregory	113
Wang, Jianping.....	50	Wells, Lenny	98
Wang, Kevin Y.	51, 107	Wen, Shanna.....	72
Wang, Lei	59, 85	Wendakoon, Sumithra K.	74
Wang, Qian.....	51	West, Todd P.....	52, 58, 61, 77, 81, 91, 101
Wang, Qin	112	Wheeler, Corey	92
Wang, Qirui	51	Whipker, Brian E.	68, 114
Wang, Ruihui	52	Whitaker, Bruce D.	60, 61
Wang, Shiping	59, 69, 85	Whitaker, Vance	58, 60, 90, 105
Wang, Xiang.....	95	Whitaker, Vance M.....	57, 61, 103
Wang, Xin	85	White, Sarah A.	47, 54, 99, 100, 101
Wang, Xinjian	77	Whitmore, Bonny Burns	55
Wang, Xueni.....	56, 76, 98, 108	Whyte, Celia D.....	53
Wang, Yan	52, 66, 95	Wilde, Dayton	55
Wang, Yunsheng.....	85	Williams, Annalisa	58
Wang, Zheng	99	Williams, David	113
Ward, Brian	109	Williams, Kimberly A.	93, 97
Ward, Daniel	74	Williamson, Jeffrey G.	53, 95, 99, 104
Ward, Nicole A.....	54	Williamson, John D.....	110
Warmund, Michele R.	69, 98, 99	Williamson, Keith	105
Warner, Ryan M.	92, 97	Williams, Robert	63
Warpeha, Katherine.....	84	Williams-Woodward, Jean	54
Warren, Peter.....	104	Willingham, Cameron	55
		Wilson, Barrett	76

Wilson, S. Evan.....	98	Yang, Y.....	107
Windham, Alan S.....	54	Yang, Ya.....	94
Wintermantel, William M.....	64	Yang, Yan.....	52
Winterstein, Michael.....	58	Yang, Yujie.....	51, 113
Wiser, Laura A.....	114	Yao, Shengrui.....	65, 94
Wisniewski, Michael.....	61	Yao, Xiefeng.....	54
Wohleb, Carrie H.....	53, 77	Yarnes, Shawn.....	63
Wolfe, Dwight.....	56	Yau, Frank Y.....	51, 107
Wolyn, David.....	54, 55	Yeo, Kyung-Hwan.....	57
Wood, Dave.....	107	Yildiz, Dilek.....	83
Wood, Spencer D.....	56	Yin, Xiang.....	52
Woolard, Derek D.....	49, 94, 106, 112	Yoder, Aaron.....	77, 110
Wright, Amy N.....	104	Yonezawa, Nobushige.....	82
Wright, Glenn.....	95, 102, 105	Yoo, Dong Lim.....	56
Wright, Mark.....	107	Yoon, Young-Ho.....	73
Wright, Robert D.....	54	Young, Cassie.....	52
Wright, Shawn.....	110	Young, Kelly.....	71, 99
Wszelaki, Annette L.....	63, 74, 111	Yousef, Gad G.....	57, 61, 77
Wu, Ting.....	74	Yu, Oliver.....	85
Wyant, Karl.....	71	Yu, Qibin.....	93
X			
Xiao, Zhenlei.....	112	Yu, Xiuming.....	59, 69, 85
Xiaozhong, Liu.....	94, 112	Yu, Yuan.....	93
Xie, Min.....	85	Yuan, Deyi.....	93, 94
Xu, Chenping.....	75	Yue, Chengyan.....	79, 111
Xu, Jinghua.....	54	Yumbya, Penina Mueni.....	86, 95
Xu, Ran.....	109	Yun, Hae Keun.....	51
Xu, Wenping.....	59, 69, 85	Yun, Jin I.....	79
Y			
Yalemar, Juliana.....	107	Yun, Seok Kyu.....	54
Yamanaka, Kumi.....	62	Z	
Yamazaki, Kiyoshi.....	57	Zajicek, Jayne M.....	50
Yan, Fangfang.....	107	Zaman, Qamar.....	80
Yang, Feixiang.....	94	Zasada, Inga.....	69
Yang, Mohua.....	51	Zeng, Yan-Ling.....	72
Yang, Qi.....	85	Zhang, Caixi.....	59, 69, 85
Yang, Wei Qiang.....	103, 104	Zhang, Dangquan.....	51
Yang, XiaoTang.....	74	Zhang, Donglin.....	51, 72, 77, 93, 94, 97, 107, 113
Yang, Xingping.....	54	Zhang, H.....	107
		Zhang, Liangsheng.....	85
		Zhang, Lin.....	51, 72, 77, 107
		Zhang, Linzhong.....	85

Zhang, Qixiang	97	Zhijian, T. Li	51, 85
Zhang, Riqing	93	Zhou, Shujun	66
Zhang, Song	52	Zhu, Hao	110
Zhang, Yanlong	50	Zhuang, Yan	96
Zhang, Zejing	82	Zibilske, Larry M.	75
Zhang, ZhaoQi	74	Zinati, Gladis	56
Zhao, Xiaofan	78	Zlesak, David C.	62
Zhao, Xiaojie	68	Zorrilla, Cinthya	77
Zhao, Xin	49, 53, 58, 60, 64, 75, 96, 97, 98, 112	Zotarelli, Lincoln	86, 110, 113
Zhen, Shuyang	93	Zwart, Drew	109
Zheng, Guomin	82	Zwieniecki, Maciej	98
Zheng, Ping	79	Zystro, Jared	72, 76
Zheng, Youbin	106		

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