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How to Use the Program Book

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- Use Daily Tabs for More Detailed Session Information

www.agronomy.org  www.crops.org  www.soils.org
REACHING THE NEXT GENERATION OF PLANT SCIENTISTS SINCE 2008

2008-16 APPROX.
65 EVENTS IN
5 CONTINENTS,
> 10,000 PARTICIPANTS

YEAR JOINED THE NETWORK

2008
University of Minnesota

2011
University of Wisconsin-Madison

2012
Cornell University
University of California-Davis
North Carolina State University
University of Nebraska-Lincoln

2013
University of Hohenhiem
Kansas State University
Federal University of Lavras
Federal University of Vícosa

2014
Iowa State University
Punjab Agricultural University
University of Pretoria
Wageningen University

2015
Henan Agricultural University
Professor Jayashankar Telengana
State Agricultural University
Texas A&M University

2016
CIMMYT
Purdue University
Shandong Agricultural University
University of California-Berkeley

2017
University of Illinois Urbana-Champaign
University of Guelph
North-West University (South Africa)
Indian Agricultural Research Institute
Sichuan Agricultural University

For a schedule and to learn how you can participate, please visit:
Pioneer.com/Symposia
Welcome to Phoenix

108th ASA Annual Meeting • 61st CSSA Annual Meeting • 80th SSSA Annual Meeting

As Program Chairs of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America, we welcome you to the 2016 International Annual Meeting. We are very excited about this year’s program theme “Resilience Emerging from Scarcity and Abundance,” a theme that is woven throughout the sessions and symposia this week. Our innovative science addressing today’s grand challenges will be greatly strengthened by the broad interdisciplinarity across our three societies. Among the programming changes this year are the addition of 5-minute rapid presentations and generally shorter symposia across all three societies. This has allowed us to set aside more time and dedicated space during lunchtime for you to network with colleagues and mentors. We hope these changes not only enable the presentation of information in a more concise manner but also free up some of your week for networking.

Highlights of this year’s program include the Opening Keynote presentation by Sandra Postel, director of the Global Water Policy Project on Sunday evening, followed by a Welcome Reception in the exhibit hall. Dr. Ray Weil of the University of Maryland will present the SSSA plenary (Nyle C. Brady Frontiers of Soil Science Lectureship) on Monday morning; a panel of Certified Crop Advisor leaders will present the ASA plenary (Dr. & Mrs. E.T. York, Jr. Lectureship) on Tuesday morning; and Dr. Gary Paul Nabhan, Director of the Center for Regional Food Studies and W.K. Kellogg Endowed Chair at the University of Arizona will present the CSSA Plenary (Betty Klepper Endowed Lectureship) on Wednesday morning. Six professional tours and 14 workshops are also provided for your professional enrichment. The Closing Reception includes a Keynote presentation titled “Our Good Earth: Soil’s Key to Food Resilience” by Dennis Dimick, executive environment editor at National Geographic magazine.

Other activities are planned for the week offering fun and relaxation, including four destination tours. We have expanded the lunch time period to allow more professional networking and we hope you will use this time to interact with colleagues and students from many disciplines. Numerous shops, restaurants, and museums are within close proximity to the convention center in downtown Phoenix. On the lighter side, there will be a reception on Tuesday night for viewing of the US presidential election results.

While your contributions will make this a successful meeting, we also thank our sponsors and exhibitors who have helped finance and enrich this year’s meetings. We are grateful to the Division Chairs and Community Leaders who have tirelessly taken on the challenge of linking various sessions to the “Resilience” theme. Finally, we give a special thanks to the headquarters staff of ASA-CSSA-SSSA who have worked diligently to make this a tremendous annual event. We wish you a great week in Phoenix!
- Tension Infiltrometers
- Wooding Infiltrometers
- Borehole Infiltrometers
- Tensimeters
- Tensiometers - all sizes
- Stainless Steel Lysimeters
- Flow Cells
- Penetrometers
Featured Speakers

Opening Session Keynote | Welcome Reception
Sunday, Nov. 6, 6:00–7:00 pm,  
PCC, Ballroom 120 B-C
Reception follows 7:00–9:00 pm in the Exhibit Hall
Sandra Postel, Global Water Policy Project

SSSA Plenary Address | Brady Lecture | Awards | Breakfast
Monday, Nov. 7, 7:00–9:00 am
Sheraton, Valley of the Sun ABC
“Soil Science, Integrated Systems and Nyle Brady’s Clarion Voice and Legacy.”  
Ray Weil, University of Maryland

ASA Plenary Address | York Lecture | Awards | Breakfast
Tuesday, Nov. 8, 7:00–9:10 am
Sheraton, Valley of the Sun ABC
“The Future of Agronomy in the Field I, II and III.”  
Thomas Weir, Farmers Edge  
Amy Asmus, Asmus Farm Supply, Inc.  
Juan Manuel Osorio, General Manager

CSSA Plenary Address | Klepper Lecture | Awards | Breakfast
Wednesday, Nov. 9, 7:00–9:00 am
Sheraton, Valley of the Sun ABC
“Innovations Happen on the (Arid) Margins: Farmers as Innovators in Fostering Agro-Ecological Resilience and Crop Selection in the Face of Climate Change.”  
Gary Nabhan, University of Arizona

Closing Session Keynote | Reception
Wednesday, Nov. 9, 5:00–6:00 pm  
Reception 4:30–5:00 pm
PCC, Ballroom 120 B-C
“Our Good Earth: Soil’s Key to Food Resilience.”  
Dennis Dimick, (Ret.) National Geographic Magazine

ASF Lectureship Series
Monday, Nov. 7
• Martin and Ruth Massengale Lectureship
  11:00 am–12:00 pm | PCC, 224 A
  Kenneth J. Moore, Iowa State University
  “Designing Resilient Cropping Systems.”
• Calvin Sperling Memorial Biodiversity Lectureship
  1:30–2:30 pm | PCC, 123
  Michael Casler, USDA-ARS
  “It’s Just Grass, Isn’t It?”

Tuesday, Nov. 8
• Ron Phillips Plant Genetics Lectureship
  8:30-9:35 am | PCC, 122 BC
  Timothy J. Close, University of CA-Riverside.
  “Context and Relevance of Cowpea Genome Resources.”
• William H. Patrick, Jr. Memorial Lectureship
  2:15–6:00 pm | PCC, 125 B
  Mark H. Stolt, University of Rhode Island.
  “Soil Carbon Across the Wetland Landscape: Forms, Functions, and Processes at Differing Scales and Settings.”
• Leo M. Walsh Soil Fertility Distinguished Lectureship
  5:15–8:00 pm | PCC, 129 B
  William R. Raun, Oklahoma State University
  “Precision Agriculture for the Developed and Developing World.”

Wednesday, Nov. 9
• Francis E. Clark Distinguished Lectureship
  on Soil Biology
  1:30–3:30 pm | PCC, 124 A
  Peter Groffman, CUNY ASRC Environmental Initiative
  “Looking Up and Out as Well as Down and In in Soil Microbial Ecology.”
• Sergei A. Wilde Distinguished Lectureship
  on Forest Soils
  1:30 pm–2:35 pm | PCC, 122 B
  Lawrence A. Morris, Univ. of Georgia-Athens
  “Use of Forests and Trees for Waste Treatment and Site Remediation: Reconciling Design with Research.”
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Hotels and Distances to the Phoenix Convention Center North

1. Sheraton Grand Phoenix—Headquarters Hotel
   340 N. Third St., 2 blocks
2. Hyatt Regency Phoenix
   122 N. 2nd St., 1 block
3. Renaissance Phoenix Downtown Hotel
   100 N. 1st St., 2 blocks
4. The Westin Phoenix Downtown
   333 N. Central Ave., 3 blocks
5. Holiday Inn Express Hotel & Suites-Downtown Phoenix
   620 N. 6th St., 5 blocks
What's new in the ACSESS Digital Library?

NEW CONTENT FOR DIGITAL LIBRARY USERS
Tricia Newell, Manager of Sales & Marketing

Publish with Us!
Warren Dick, Agricultural and Environmental Letters Editor

Journal of Environmental Quality Best Paper Award Presentation
Ed Gregorich, JEQ Editor

Agronomy—Grow with It!
CHILDREN’S BOOK AND WEBSITE LAUNCH
Comfort Ateh, Melanie Bayles, and Greg Welbaum

Reception with drinks and snacks to follow
co-sponsored by

Come visit Dynamax and Delta-T Devices in ASA Booth #406 for all of the latest innovations in Plant Science instrumentation.

1-800-896-7108  www.dynamax.com  admin@dynamax.com

ACSESS—Your Society Publisher

Join us for a special event
Monday, Nov. 7, 3:30–4:30 pm
Demonstration Stage, Exhibit Hall
Phoenix Convention Center

Your science lives here!
The ASA, CSSA, and SSSA Graduate Student Committee hosted the 3rd annual Graduate Student Leadership Conference on November 5-6, just prior to the start of the ASA, CSSA, and SSSA International Annual Meeting. Students were selected in a highly competitive application process. The conference, developed by students and for students, featured sessions designed to build on their leadership and communications skills and offered many networking opportunities. Sessions included effective communications, professionalism, leadership (using personalized DISC assessments), positive conflict resolution, behavioral interviewing, and interdisciplinary collaboration.

Congratulations to our Students

Nutifafa Adotey, Louisiana State Univ.
Matthias Bacher, Univ. College Dublin
Mike Badzmirowski, Virginia Tech
Leonardo Bastos, Univ. of NE-Lincoln
Mahendra Bhandari, Texas A&M Univ.
Meyer Bohn, North Dakota State Univ.
Matthew Bright, Ohio State Univ.
Joseph Burke, Texas Tech Univ.
Kristine Bybee-Finley, Cornell Univ.
Jessica Chiartas, Univ. of CA-Davis
Silvia Cordova, Iowa State Univ.
Angel Cruz, North Carolina State Univ.
Michelle Dobbratz, Univ. of Minnesota
Marie English, Univ. of Tennessee-Knoxville
Alevtina Evgrafova, Univ. of Koblenz-Landau
Claire Friedrichsen, Univ. of Florida
Yaru Lin, Auburn Univ.
Valeria Lobos, Univ. of Manitoba
Dennis Nicu Lozada, Univ. of Arkansas
Fazal Manan, Univ. of Minnesota
Sarick Matzen, Univ. of CA-Berkeley
Kyle McCarthy, Michigan State Univ.
Mark McDonald, Texas Tech Univ.
Rebecca Mock, Univ. of CA-Riverside
Christopher Montes, Univ. of Illinois
Michael Nattrass, Mississippi State Univ.
Tyler Nigon, Univ. of Minnesota
Cheyne Ogilvie, Univ. of Saskatchewan
Kshitij Parajuli, Utah State Univ.
Smriti PehimLimbu, NC State Univ.
Juan Perez-Gutierrez, Mississippi State Univ.
Sharon Perrone, Univ. of Minnesota
Maria Ponce de Leon, PA State Univ.
Helen Pruitt, North Carolina State Univ.
Salvador Ramirez, Univ. of NE-Lincoln
Wayne Roper, North Carolina State Univ.
Christopher Ryan, Univ. of Florida
Mara Sanders, Rutgers Univ.

Hannah Schneider, PA State Univ.
Andrew Scholtz, South Dakota State Univ.
Geoffrey Schortgen, Purdue Univ.
Chrisie Segars, Oklahoma State Univ.
Anne Sexton, Univ. of Florida
Sonisa Sharma, Oklahoma State Univ.
Sarah Shawver, Tarleton State Univ.
Jagdeep Singh Sidhu, SD State Univ.
Amminder Singh, CA State Univ.-Fresno
Narinder Singh, Kansas State Univ.
Surendra Singh, Univ. of Arkansas-Pine Bluff
Cameron Stephens, PA State Univ.
Megan Taylor, Purdue Univ.
Zack Valdez, Baylor Univ.
Katelyn Walter, North Dakota State Univ.
Joseph Weeks, Kansas State Univ.
David Weisberger, Iowa State Univ.
Carolyn Wilson, Dalhousie Univ.
Yilu Xu, Univ. of South Australia
Jacob Young, Univ. of Missouri

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2016 Annual Meeting Photo Contest

See the Winners at the Society Center during exhibit hall hours
Live Streaming Sessions

Monday, Nov. 7

44 Symposium—IPM Resistance Management as related to CCA specialty certification exam prep
PCC, 121 AB
8:00 AM–12:00 PM
Presider: Dawn R. Gibas
Integrated Pest Management Professionals Community
Earn 3.5 PM CEUs.

93 Symposium—Nutrient Management as related to CCA specialty certification exam prep
PCC, 121 AB
1:00 PM–5:00 PM
Presider: Dawn R. Gibas
Nutrient Management Professionals Community
Earn 3.5 NM CEUs.

Tuesday, Nov. 8

207 Symposium—Crop Management as related to CCA specialty certification exam prep
PCC, 121 AB
8:00 AM–12:00 PM
Presider: Dawn R. Gibas
Crop Management Professionals Community
Earn 3.5 CM CEUs.

259 Symposium—Soil and Water Management as related to CCA specialty certification exam prep
PCC, 121 AB
1:00 PM–5:00 PM
Presider: Dawn R. Gibas
Soil and Water Management Professionals Community
Earn 3.5 SW CEUs.

Wednesday, Nov. 9

376 Symposium—Sustainable Agronomic Practices
PCC, 121 AB
8:00 AM–5:00 PM
Presider: Dawn R. Gibas
MORNING session (8:00 AM–12:00 PM)
Earn 3.5 PD CEUs.
AFTERNOON session (1:00–5:00 PM)
Earn 3.5 PD CEUs.
## Ticketed Functions

Attendees may purchase tickets for Society events not included in the Annual Meeting registration fee at Registration at least 24 hours in advance if space is available.

### Sunday, Nov. 6
- **Stiegler Fellowship Golf Fundraiser**, 6:30am-1:00pm $175
- **Urban Soils-the Desert/City Interface Phoenix Tour**, 7:00am-4:30pm $85
- **Sedona, AZ Tour**, 7:30am-4:00pm $95
- **Biosphere 2 Tour**, 8:00am-3:30pm $115
- **Irrigation and Cropping Systems of Central Arizona Tour**, 8:00am-2:00pm $110
- **Comet-Farm: Evaluate How Conservation Practices Can Impact the Carbon Footprint of Agri and Forestry**, 8:30am-12:30pm $40
- **Introduction to JMP Software Workshop**, 8:30am-11:30am $85
- **Utilizing the GAPIT R Package to Facilitate Analysis of Diversity Panels Workshop**, 9:00am-11:00am $80
- **Mechanical Measurements of Crops and Soils: Principles and Techniques Workshop**, 10:00am-12:00pm $45
- **Field-Based Phenotyping in Maricopa Tour**, Sunday, 11:00am-4:00pm $45
- **Discover Phoenix and Scottsdale Tour**, Sunday, 1:00-4:00pm $50
- **Intro to Multivariate Analysis Workshop**, 1:00-5:00pm $115
- **Advanced Techniques in JMP Workshop**, 1:30-4:30pm $85
- **Opening Reception - Extra Ticket (Non-Registrants)**, 7:00-9:00pm $15

### Monday, Nov. 7
- **SSSA Breakfast & Plenary Address**, 7:00-9:00am $10
- **Implementing Genomic Selection in Plant Breeding Programs Workshop**, 8:00am-12:00pm $165
- **Discover Phoenix and Scottsdale Tour**, Monday, 9:00am-12:00pm $50
- **Elemental Analysis Solutions for Farm-to-Table Safety, Quality and Sustainability Workshop**, 9:00am-12:00pm $55
- **Make a Compelling Science Message Workshop**, Monday, 9:30-11:30am $30
- **Generation Image-Photography 101 for Communicating Lab Research Workshop**, Monday, 1:00-3:00pm $40

### Tuesday, Nov. 8
- **Frank N. Meyer Award & Breakfast**, 6:30-8:00am $45
- **ASA Breakfast & Plenary Address**, 7:00-9:00am $10
- **Taliesin West and Carefree, AZ Tour**, 9:00am-1:30pm $85
- **Generation Image-Photography 101 for Communicating Lab Research Workshop** - Tuesday, 9:30am-11:30am $40
- **Make A Compelling Science Message Workshop - Tuesday, 1:00-3:00pm** $30
- **Women In Science Workshop/Reception, Sponsored by Bio Huma Netics, Inc. and Monsanto** 2:00-4:30pm $35
- **Women In Science Workshop/Reception, Sponsored by Bio Huma Netics, Inc. and Monsanto** - Student, 2:00-4:30pm $15

### Wednesday, Nov. 9
- **CSSA Breakfast & Plenary Address**, 7:00-9:00am $10
- **Desert Botanical Gardens Tour**, 9:00am-12:00pm $75
- **Make a Compelling Science Message Workshop - Wednesday, 9:00-11:00am** $30
- **Field-Based Phenotyping In Maricopa Tour - Wednesday, 12:30-4:00pm** $35
- **Closing Reception - Extra Ticket (Non-Registrants)**, 4:30-5:30pm $15
Annual Meeting App
Make sure to download the new and improved mobile meetings app to connect with attendees, search the program, and view other valuable information. Search for "MySci Mtgs," on your Android or iPhone/iPad to download the app and get connected.

Business Center
The UPS office is located on the first level of the PCC West Building. Open M-F: 7:00am -6:00pm; Sat: 8am-2pm; Sun: closed - (602) 251-0135, store5750@theupsstore.com
The Fed-Ex office is located on the first floor of the Sheraton Grand Hotel. Open M-F: 7:00am -7:00pm; Sat-Sun: 9am-5pm - 602-258-0266, usa5048@fedex.com
Both locations provide:
- High-Speed Printing & Copying
- Wide-Format Printing
- Computer Time Rental
- Packing Services
- Shipping & Freight Services
- Office Supplies
- Package & Freight Receiving

Concession Stands
Complimentary coffee will be available starting at 9:30 am near the Career Center in the Exhibit Hall on Monday, Tuesday, and Wednesday morning while supplies last.
Monday coffee sponsored by Gylling Data Mgmt.
Tuesday coffee sponsored by MicaSense, Inc.
Convention Center concession stands are located in the Exhibit Hall on the third floor and the Metro Marche on the first floor.

Corporate Member & Exhibitor Lounge
Exhibitors and employees of corporate members, be sure to visit the Corporate Member and Exhibitor Lounge during a break in your busy meetings schedule. The lounge is conveniently located in the Exhibit Hall.

Dietary Needs
If you have purchased a ticket to a Society-sponsored meal function and have any dietary restrictions, visit the Annual Meeting Information Desk in the Registration Center at least 24 hours prior to the meal function.

Earn CEUs
Earn Continuing Education Units (CEUs) toward your Certified Crop Adviser (CCA), Certified Professional Agronomist (CPAg), Certified Professional Soil Scientist (CPSS), or Certified Professional Soil Classifier (CPSC) certifications.
A list of approved CEU sessions is provided in the Program Book on pages 24-27. SSSA and ASA certificants will find the self-reporting CEU forms on the SSSA and ASA certification websites, www.soils.org/certifications, www.certifiedcropadviser.org. Note: CCAs may only receive CEUs for structured oral presentations; open poster sessions do not qualify for CCA CEUs.

Election Night Watch Party
PCC, 120 BC
Tuesday, 6:00 pm–9:00 pm
Join your fellow conference attendees in anticipating and viewing the election results, along with election trivia, pictures with the candidates, friendly conversation, and much more!
View the Election Night Watch Party ad on page 40.

Express Preregistration
Saturday 2:00 pm–5:00 pm
Sunday 10:00 am–12:00 pm
Registered Already? Need to pick up minimal meeting materials? Experience the "light" version of preregistration located at the Sheraton.
- Print off your badge
- Pick up your program book
- Save time!

Give Back to Phoenix
Again this year, the Societies are offering a “give back” opportunity to benefit the people in need in Phoenix. The recipient this year is Feeding America. Many of you made donations to Feeding America when you registered, and for that we offer you a hearty Thank You!
You may also donate to Feeding America during the Annual Meetings by stopping by the Registration Center or contributing at the Welcome Reception entrance. Thank you for your generosity.

Internet

Email Oasis
Complimentary wired Internet access (computers provided) is available just outside Room 222 of the Convention Center during the following times:
Sunday, 12:00–6:00 pm
Monday–Tuesday, 7:00 am–6:00 pm
Wednesday, 7:00 am–12:00 pm

Wireless Hot Spot
Complimentary Wi-Fi is available all week throughout the PCC. The network name is ACS2016.
Lost & Found
Registration Center
During registration hours, please check with the Annual Meeting Information Desk to turn in found items or look for lost items. All items not claimed by 5:00 pm on Wednesday, Nov. 9 will be turned in to the convention center security office.

Message & Information Area
Located in the Registration Center, this area is available to leave messages and post information for attendees. Please be sure to check for messages left for you at this board.

Moderator Training
PCC, 221 C
Every moderator must attend a training session in advance of your session. You will meet the audio/visual staff and learn to use the equipment in your meeting room. You’ll learn proper operation of the laptop PC and data projector, how to view a presentation that is already uploaded, and what to do when a speaker shows up at the last minute with their presentation on a flash drive. Attending an orientation session will help ensure success for your session.
Sunday, 7:00-7:30 am & 12:00-12:30 pm
Monday, 7:00-7:30 am & 12:00-12:30 pm
Tuesday, 7:00-7:30 am & 12:00-12:30 pm
Wednesday, 7:00-7:30 am

Morning Yoga
*Sponsored by Soil Measurement Systems, LLC*

Location: Sheraton, Camelback AB
Stay energized by participating in complimentary morning yoga! A certified instructor from Urban Yoga will guide conference attendees, integrating the peace found in yoga class into everyday life, especially during the Annual Meeting. This free event is first-come, first-served. You are welcome to bring your own mat, or Urban Yoga will bring one for you to borrow. Come join us!
Foundations Yoga (beginner’s class) will be held on Monday, November 7, 6:30-7:30 am.
Urban Flow Yoga (intermediate-advanced class) will be held on Tuesday, November 8, 6:30-7:30 am.

News Media
Phone: 608-658-9992
Monday–Wednesday, 8:00 am–4:00 pm
Media representatives and public information officers: Pick up your name badge at the registration desk. If you would like to meet the ASA, CSSA, and SSSA Science Communications staff, call 608-658-9992; leave a message if necessary. Visit www.acsmeetings.org/newsroom for more information.
PREREGISTRATION REQUIRED FOR ALL MEDIA.

Presentation Uploading
PCC, Room 222 A
All poster and oral presenters are expected to upload their presentation (in advance of coming to the meetings or while in Phoenix) by the end of the day prior to their presentation. Presenters using the data projector must review their presentation at least once prior to their presentation. Staff are available to assist you in doing this in the Speaker Ready Room, Room 221 A.

Oral Sessions
Audio-Visual Equipment Provided
Unless prior arrangements have been made, presenters will have available the following equipment:
• One data projector with projection screen.
• One Laptop PC with monitor.
• One wired lectern microphone.
• Laser pointer
If additional equipment is needed, the presenter is responsible for renting the equipment directly from Prestige Audio Visual. Please go to the Annual Meeting Information Desk and ask them to contact Prestige Audio Visual by radio.

Poster Sessions
PCC, Exhibit Hall CDE
ASA, CSSA, & SSSA will display posters on a half-size poster board for one day.

<table>
<thead>
<tr>
<th>Day</th>
<th>Set-up time</th>
<th>Display time</th>
<th>Removal time</th>
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<tbody>
<tr>
<td>Mon.</td>
<td>7:00–9:00 am</td>
<td>9:00 am–6:00 pm</td>
<td>6:00–7:00 pm</td>
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<tr>
<td>Tues.</td>
<td>7:00–9:00 am</td>
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<td>6:00–7:00 pm</td>
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<td>Wed.</td>
<td>7:00–9:00 am</td>
<td>9:00 am–4:30 pm</td>
<td>4:30–5:30 pm</td>
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</tbody>
</table>
Cash Bars: Monday–Tuesday, 3:30–6:00 pm
• The poster board numbers correspond to the poster number as listed in the program. It is a three or four digit number directly to the left of the presentation title.
• Check the program for times when authors will be present to discuss their research.
• Photos of poster presentations are not allowed unless the author has granted permission to the photographer.
• Velcro is available in the Exhibit Hall while supplies last. The use of push pins is prohibited.
Registration Center
Phoenix Convention Center, 3rd Floor
Phone: (602) 239-5900
Online registration is open until Wednesday, Nov. 9. Individuals who have not registered for the Annual Meeting can do so online at www.acsmeetings.org/register.

Registration Center Hours
Sunday, 8:00 am–8:00 pm
Monday–Tuesday, 7:00 am–5:00 pm
Wednesday, 7:00 am–2:00 pm

Preregistration
Attendees who registered before Nov. 3 can pick up their badge and any other purchased items at the Preregistration Desk.

On-Site Registration
Attendees who registered after Nov. 3 can pick up their badge, program book and, if purchased, abstract CD at the On-Site Registration Desk.

Refunds/Cancellations
There are no refunds for registrations after Oct. 12. Cancellation requests received in writing by Wednesday, Oct. 12 will be refunded the fee, less an administrative fee.

Section, Community, and Division Posters
Society section, community, and division posters, located inside the Exhibit Hall to the right of the entrance, will display information such as officer names and contact information, business meeting agendas, community information, symposia listings, and weekly schedule overviews.

Social Media
Follow Us on Twitter
Follow @ASA_CSSA_SSSA on www.twitter.com for news and updates. Posts about the Annual Meeting will use the hashtag #ACSMtg.

Join Us on Facebook
Join ASA, CSSA, SSSA, and SASES on Facebook by going to www.facebook.com
/ASA.agronomy
/CSSA.crops
/SSSA.soils
/SASES.students
View the Social Media Contest ad on page 54. Contest sponsored by SoilMoisture Equipment Co.

Society Awards and Honors
Located in the Exhibit Hall of the PCC, the Societies’ Awards and Honors area is where you will see the names, photos, and accomplishments of all of this year’s ASA, CSSA, and SSSA award winners and Fellows. Honorary members, past presidents, and editors are honored/thanked here as well. Plan on spending plenty of time here to review the accomplishments of these distinguished recipients.

Award winners and Fellows are encouraged to take their poster home with them on Wednesday.

Speaker Ready Room
PCC, Room 222 A
Sunday–Tuesday, 7:00 am–6:00 pm
Wednesday, 7:00 am–12:00 pm
If you have not submitted your presentation online prior to the meeting, please do so in the Speaker Ready Room the day before your presentation.

Speakers may submit presentation files in PowerPoint (.ppt, pps, pptx, or ppsx), or portable document format (.pdf). Presentations may be saved on a USB hard drive (Pocket Drive, iPod), USB flash drive, CD-ROM, CD-R, or DVD. Even if your graphics or video clips are embedded in your presentation, you still need to bring them with you to the conference and upload them in the Speaker Ready Room the day before your presentation.

We highly recommend that all speakers visit the Speaker Ready Room for an opportunity to practice their presentations and get comfortable with the equipment. Technicians will be available to assist you.

If your presentation was created on a Macintosh and converted to run on a PC, please test it before you come to the meeting. Make sure that the hyperlinks still function, and avoid using a rewritable CD (CD-RW), as we’ve encountered compatibility problems with these. If your converted file includes embedded video, your video will most likely NOT play automatically on the PC platform. You will need to either convert your .mov files to .avi format or create a link in your slide show to an external .mov file. If you choose the latter, your animation will play in a separate QuickTime window, outside of your PowerPoint presentation.

Welcome Reception
PCC, Exhibit Hall CDE
Sunday, 7:00–9:00 pm
Meet your colleagues while previewing the exhibits. All registered attendees are welcome (badge required). Appetizers and a cash bar are available. Donations for Feeding America will be collected at the door.
Create your own schedule, receive announcements, connect with colleagues, and keep up to date with changes by downloading the free “MYSCI MTGS” conference app!

Search “MySci Mtgs” in your app store

Get the App!

New in 2016!
A designated networking/meeting/gathering area in the Exhibit Hall for attendees.

Tables of 10 are available:
Monday-Tuesday  9:00 am-6:30 pm
Wednesday 9:00 am-4:30 pm

Food/beverage for purchase during lunch hours.

Space is available on a first come, first served basis.

### 2016 Demonstration Theater
**Full Schedule throughout the week!**

Featuring
- Special Society Events
- Exhibitor New-Product Showcase
- Presentations on the Latest in Research and Product Development!

<table>
<thead>
<tr>
<th>MON</th>
<th>Company/Organization</th>
<th>TUE</th>
<th>Company/Organization</th>
<th>WED</th>
<th>Company/Organization</th>
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</thead>
<tbody>
<tr>
<td>11:00AM</td>
<td>Freezerworks - Sample Management Software for Quality Assurance in Crop Science</td>
<td>10:00AM</td>
<td>Bruker - Portable Elemental Analysis for Agriculture, Food Safety &amp; Quality</td>
<td>10:00AM</td>
<td>Steven’s Water Monitoring - Soil Monitoring With Stevens Hydra Probe Soil Sensor, Meeting the Challenges of new Applications</td>
</tr>
<tr>
<td>12:30PM</td>
<td>Gasmet Technologies - Simultaneous measurement of N2O, CH4, CO2 and Ammonia in soil flux measurements using field portable FTIR gas analyzers.</td>
<td>11:30AM</td>
<td>Irometer Company, Inc. - Understanding Soil Moisture Sensor Data to Maximize Water Use Efficiency</td>
<td>11:30AM</td>
<td>CID Bio-Science, Inc. - Applications for Root Imaging in Agriculture</td>
</tr>
<tr>
<td>2:00PM</td>
<td>METER Presents</td>
<td>1:00PM</td>
<td>Delta-T - Using the DeltaLINK weather simulator to develop GP2 Data Logger applications and refine experimental methods</td>
<td>1:00PM</td>
<td>USDA-NRCS - Using Web Soil Survey</td>
</tr>
<tr>
<td>3:30PM</td>
<td>ACSESS—Your Society Publisher, Your science lives here!</td>
<td>2:30PM</td>
<td>MicaSense - Remote Sensing Solutions for Precision Agriculture</td>
<td>2:30PM</td>
<td>Davis Instruments - Advances in Agricultural Data to the Farmer’s Advantage</td>
</tr>
</tbody>
</table>
Join us at the Society Center, located in the Exhibit Hall. The Society Center is anchoring the exhibits and may be found in the center of the exhibition space.

Need help? ASA, CSSA, and SSSA staff will be on hand to answer questions and help you take advantage of our full range of programs and services.

The Society Center is more than just a place to go when you need help or information—it’s a place to relax, work and catch up with colleagues. Come visit with us—we’d like to spend time with you.

Look for events happening in and around the Society Center each day!

ACSESS Digital Library!

The ACSESS Digital Library is a complete collection of content published by the American Society of Agronomy, Crop Science Society of America and Soil Science Society of America. The Digital Library makes it possible to browse, research, comment on and share all of our published literature in one convenient place. Stop by to see what’s new!

The Digital Library is a vital component in serving our mission and our membership by providing innovative, valuable resources for the betterment of our community, and our world.

Membership

- Learn about our websites.
- Pick up materials to take back with you and share with colleagues.

Publications

- Browse through our bookstore to see what’s new and purchase a book.
- Request a demonstration of the Digital Library, ask questions and set up your subscription.

Science Policy

- Learn more about the issues on the table during this session and what you can do.
- Share your concerns.

Certification

- Learn about why professional certification is important to your industry!
  - Certified Crop Adviser (CCA)
  - Certified Professional Agronomist (CPAg)
  - Certified Professional Soil Scientist (CPSS)
- Find out how to find a certified professional or become one yourself.

Career Center

www.careerplacement.org

Location
PCC, Exhibit Hall CDE

Hours
- Sunday, 7:00–9:00 pm
- Monday, 9:00 am–6:00 pm
- Tuesday, 9:00 am–6:00 pm
- Wednesday, 9:00 am–4:30 pm

Student Career Fair,
Monday, 3:00–6:00 pm

Employers

- Post your job announcements
- Search resumes
- Message directly with job seekers
- Schedule and conduct interviews

Job Seekers

- Post your resume online
- View job announcements
- Schedule interviews and meet with employers
Student & Early Career Activities

Undergraduate Students

Students of Agronomy, Soils, and Environmental Sciences (SASES) is the undergraduate student program of ASA, CSSA, and SSSA. They are meeting Saturday through Monday at the Annual Meeting and engaging in activities designed for and run by the undergraduate students. Highlights of the three-day event include tours of local area, professional development programs, SASES elections, and contests including Speech, Research, Club Poster, and the ever-popular Quiz Bowl (conducted like a game show).

SASES Registration, Registration Center
Friday, 5:00–9:00 pm
Saturday, 6:00–7:30 am
and all times Registration is open for attendees.

Graduate School Forum
The Forum is designed for university representatives to meet with potential graduate students for M.S. and Ph.D. programs, provide information on their schools and departments, and to discuss assistantships and fellowships. Located in the Exhibit Hall.
Sunday, 7:00–9:00 pm
Monday–Tuesday, 9:00 am–6:00 pm
Wednesday, 9:00 am–4:00 pm

Graduate Students
Exclusive events that are designed by and for graduate students. Events are open to all graduate students, regardless of Society affiliation.

Career Path Opportunities for Students, Post-Docs, and Early Career Members
PCC, Ballroom 120 D
Monday, 9:30–11:00 am
This session will give students, post-docs, and early career members an opportunity to speak with experts in various career paths, in order to gain a better understanding of career options in our discipline.

Behavioral Interviewing
PCC, 224 B
Monday, 1:00–2:30 pm
In this session, you’ll learn more about what a behavioral interview is and how to best prepare for one while still being yourself.

Elevator Speech Contest for Grad Students and Post-Docs
PCC, Room 121 C
Monday, 5:30–6:45 pm
Come watch grad students and post docs compete against each other to best describe their research in 45 seconds or less. Preregistration is required to participate, all are welcome to come watch and cheer on your favorite speaker.

Think Tank on the Future of Agricultural and Environmental Research: Addressing the Need to Do More with Less
Wednesday, 12:00–1:30 pm
PCC, Room 224 AB
The research being conducted by our graduate students is at the core of scientific advancement within our Societies. Thus, we present a session, sponsored and run by the graduate students, to address to all members of the Societies the future of research.

Early Career/Professional Development Programs
Professional development workshops have been developed by the ACS Early Career Committee and are open to all attendees at no fee.

Career Path Opportunities for Students, Post-Docs, and Early Career Members
PCC, Ballroom 120 D
Monday, 9:30–11:00 am
This session will give students, post-docs, and early career members an opportunity to speak with experts in various career paths to gain a better understanding of career options in our discipline.

Interactive Workshop:
Writing Manuscripts for Publication
Monday, 1:00–3:00 PM
PCC, Room 229 A

Expert panel: ASA/CSSA/SSSA Journals – From Manuscript Submission to Publishing
Monday, 3:15–4:45 PM
PCC, Room 229 A

Negotiation Strategies for Early Career Scientists
Tuesday, 9:30–11:00 AM
PCC, Room 230

Tips from the Experts on the Job Application and Interviewing Process
Tuesday, 12:30–2:00 PM
PCC, Room 230

Building Active Teaching- and Extension-based Programs
Tuesday, 2:00–4:00 PM
PCC, Room 230

Grant Application Navigation and Resources for Expanding Early Career Opportunities
Wednesday, 9:00–11:00 AM
PCC, Room 229 B
Professional Tours
All tours will depart from and return to the front of the PCC unless otherwise noted. Please arrive at least 15 minutes before scheduled departure time. Tickets may be purchased at On-Site Registration if available.

Two Day Tour--Desert Pedology:
Tucson to Phoenix AZ Sonoran Desert Landscapes & Watersheds
Friday, 7:00 am–Saturday, 5:00 pm
This is a full 2-day tour in the Tucson to Phoenix area exploring Sonoran desert landscapes and the soil and water relationships that feed this unique ecological landscape. Tour will leave from Tucson, AZ.
Price: $490 single/$390 double occupancy
CEUs available
Contact: Maxine Levin, maxine.levin@wdc.usda.gov

Urban Soils-The Desert/City Interface Phoenix
Sunday, 7:00 am–4:30 pm
This will be an all day tour in the Phoenix area exploring soil and water relationships in the watersheds of this major metropolitan desert environment.
Price: $85; CEUs available
Contact: Maxine Levin, maxine.levin@wdc.usda.gov

Irrigation and Cropping Systems of Central Arizona
Sunday, 8:00 am–2:00 pm
This tour will drive 40 miles south of Phoenix through the Gila River valley, which is the heart of Arizona’s irrigated row cropping area of cotton, durum wheat, alfalfa, forage corn and sorghum. General, vital issues to western, irrigated, cropping such as water availability, irrigation efficiency, nutrient management, soil organic matter, soil salinity, dust storms, conservation tillage, crop choices, and cover crops will be addressed.
Price: $110;
Contact: Kevin Bronson, Kevin.Bronson@ars.usda.gov

Biosphere 2
Sunday, 8:00 am–3:30 pm
Bus will take participants from Phoenix Conference Center to Biosphere2 in Oracle, Arizona (approximately 2 hours). The tour of the Biosphere2 will include a view of the history of the Biosphere2, a look at current soil formation and global warming experiments, and a guided tour of all of the biomes. The guided tour will be followed by a box lunch and self-guided tours of the Biosphere2 grounds, facilities, and gift shop.
Price: $115;
Contact: Jean McLain, mclainj@email.arizona.edu

Field-Based Phenotyping in Maricopa
Sunday, 11:00 am–4:00 pm
or
Wednesday, 12:30 pm–4:00 pm
The tour will visit the Maricopa Ag Center (MAC, located approximately 25 miles south of Phoenix) to learn about field-based phenotyping approaches used at MAC. After a brief welcome, the tour will visit two facilities.
Price: $45 on Sunday; $35 on Wednesday
Contact: Jeffrey White, jeffrey.white@ars.usda.gov

Destination Tours
Sedona, Arizona
Sunday, 7:30 am–4:00 pm
Head for the high country of picturesque Sedona, located at the mouth of beautiful Oak Creek Canyon. Along the way, you’ll stop at a vista overview for picture taking opportunities.
Price: $95

Discover Phoenix & Scottsdale
Sunday, 1:00–4:00 pm
or
Monday, 9:00 am–12:00 pm
The Phoenix/Scottsdale area is a premier vacation and travel destination where visitors an experience a variety of cultural and historical aspects as well as unique architecture, all surrounded by desert vistas and scenic Southwestern views.
Price: $50 Sunday or Monday

Taliesin West and Carefree, AZ
Tuesday, 9:00 am–1:30 pm
Frank Lloyd Wright’s Taliesin West is the architectural school and foundation of the legendary master, whose talent for creatively linking indoor and outdoor spaces is on display in this engaging one-hour tour. Carefree, AZ, is an exclusive resort community located in the foothills North of the Valley where you’ll enjoy shopping and sightseeing at El Pedregal.
Price: $85

Desert Botanical Gardens
Wednesday, 9:00 am–12:00 pm
The Sonoran Desert comes alive during your tour of the Desert Botanical Gardens, where most of the world’s 20,000 varieties of cacti and desert plants are displayed in this 145-acre living museum.
Price: $75
Introduction to JMP Software  
Sunday, 8:30-11:30 am  
PCC, Room 227 A  
Sponsored by Biometry and Statistical Computing, C06 Forage and Grazinglands, C05 Turfgrass Science, and Statistical Education/Training for Researchers Community.

JMP was created by the SAS institute in 1989 to capitalize on the emerging graphic user interface (GUI) technology. Over the years JMP, available for Windows and Mac operating systems, has become the software of choice (now available as version 12) in many different fields. It could also be the software of choice in agricultural research. It is an excellent tool for experimental design and data analysis. Just like its big sibling SAS, it can interact with spreadsheets, both reading and writing. It can also read and write SAS datasets and be used as the interface to the SAS Metadata server and to SAS installed on the same computer (Windows only). Using JMP as your primary tool doesn’t mean you have to give up on SAS, just that in many cases JMP will make it easier for you. It has various tools (called platforms) that can handle most of your data analysis needs, be they uni-, bi, or multi-variate. JMP also has a very larger user community able and willing to assist in solving problems.

This introductory hands-on session will deal with creating and manipulating data tables, merging and concatenating data tables, import and export, basic graphing, and basic scripting to automate processes. Along the way we will analyze a few simple data sets. JMP offers a 30-day trial version if you don’t have access to JMP through your company/institution.

Fee: $85; Contact: evsanten@auburn.edu

Comet-Farm: Evaluate How Conservation Practices Can Impact the Carbon Footprint of Agriculture and Forestry  
Sunday, 8:30 am - 12:30 pm  
PCC, Room 227 B  

The COMET-FarmTM tool is the practical, web-based application of the USDA entity-level methods for greenhouse gas inventories. This workshop will provide hands-on instruction on greenhouse accounting at field, parcel, stand, farm and ranch scale. Over the past year there have been many enhancements and improvements to the COMET-FarmTM tool. These added features will be covered during this workshop. Some of the enhancements include a new Forest Land module, the additions of specialty crops to the cropland module, and the ability evaluate livestock grazing on croplands, pasture and range. The workshop will address how the tool was developed, and the implantation of the USDA document Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory. We encourage anyone interested evaluating the potential for carbon sequestration and greenhouse gas mitigation to attend the workshop. The workshop will benefit new and current users of the tool.

Fee: $40; Contact: matthew.stermer@colostate.edu

Utilizing the GAPIT R Package to Facilitate Analysis of Diversity Panels  
Sunday, 9:00-11:00 am  
PCC, Room 228 A  
Sponsored by Biometry and Statistical Computing and Bioinformatics in Crops and Soils Community.

GAPIT is a popular R package that is used to conduct GWAS and genomic selection. I will go over a typical analysis in GAPIT. In addition, I will review the relevant statistical and quantitative genetics background necessary to accurately interpret the results from GAPIT.

Fee: $80; Contact: alipka@illinois.edu

Mechanical Measurements of Crops and Soils: Principles and Techniques  
Sunday, 10:00 am-12:00 pm  
Sheraton, Maryvale B

Characterizing the mechanical response of plant tissues and addressing agricultural problems such as root lodging, stalk lodging, and fruit drop requires accurate measurement of mechanical forces. This workshop will describe engineering best practices for acquiring such measurements and discuss common pitfalls and measurement errors. Topics to be covered include (1) standard test types (tension, bending, compression, and shear); (2) standard instrumentation for measuring forces; (3) methods for measuring deformation and strain; and (4) common problems encountered in performing mechanical tests and strategies for avoiding these problems. Participants will leave the workshop with a much better understanding of how to design, perform, and evaluate mechanical testing techniques and methodologies.

Fee: $45; Contact: douglascook@nyu.edu

Intro to Multivariate Analysis  
Sunday, 1:00-5:00 pm  
PCC, Room 227 B  
Sponsored by Biometry and Statistical Computing, Bioinformatics in Crops and Soils Community, and Statistical Education/Training for Researchers Community.

Agronomic research often involves measurement and collection of multiple response variables in an effort to understand the more complex nature of the system being studied. Multivariate statistical methods encompass the simultaneous analysis of all random variables measured on each experimental or sampling unit. Many agronomic research systems studied are, by their very nature, multivariate; however, most analyses reported are univariate...
(analysis of one response at a time).

The objective of this workshop is to use a hands-on approach to familiarize the researcher with a set of common applications of multivariate methods and techniques for the agronomic sciences: principal components analysis, multiple regression, and discriminant analysis. Agromically relevant data sets and examples will be used throughout the workshop. We will provide the attendees with a taxonomical key for multivariate techniques, a list of relevant references for each technique, as well as R and SAS code to follow as we explore the data to assess quality and suitability for multivariate analyses. The workshop will focus on how multivariate methods can capture the concept of variability to better understand complex systems. Important considerations along with advantages and disadvantages of each multivariate tool and their corresponding research questions will be examined.

Fee: $115; Contact: villamil@illinois.edu

Advanced Techniques in JMP
Sunday, 1:30-4:30 pm
PCC, Room 227 A
Sponsored by Biometry and Statistical Computing, C06 Forage and Grazinglands, C05 Turfgrass Science, and Statistical Education/Training for Researchers Community.

JMP was created by the SAS institute in 1989 to capitalize on the emerging graphic user interface (GUI) technology. Over the years JMP, available for Windows and Mac operating systems, has become the software of choice (now available as version 12) in many different fields. It could also be the software of choice in agricultural research. It is an excellent tool for experimental design and data analysis. Just like its big sibling SAS, it can interact with spreadsheets, both reading and writing. It can also read and write SAS datasets and be used as the interface to the SAS Metadata server and to SAS installed on the same computer (Windows only). Using JMP as your primary tool doesn't mean you have to give up on SAS, just that in many cases JMP will make it easier for you. It has various tools (called platforms) that can handle most of your data analysis needs, be they uni-, bi-, or multi-variate.

This hands-on session will deal with advanced techniques for data handling, graphing and analyses. Along the way we will analyze at one fairly complicated dataset. Participants will also learn about enhancing the functionality of JMP through Add-ins and how to "package" data and analyses through scripting and journals so they may be exchanged easily with collaborators, colleagues, students, etc. JMP offers a 30-day trial version if you don’t have access to JMP through your company/institution.

Fee: $85; Contact: evansanten@auburn.edu

Implementing Genomic Selection in Plant Breeding Programs
Monday, 8:00 am-12:00 pm
PCC, Room 227 A
Sponsored by Biometry and Statistical Computing and Statistical Education/Training for Researchers Community.

Genomic Selection (GS) is currently a potential tool to increase genetic gains from breeding programs. In this workshop, statistical methodology to implement analysis for GS will be presented, this will include aspects such as: 1) pre-processing of phenotypic field data, 2) pre-processing of molecular (i.e. SNP) data, 3) preparing data (e.g. GenoMatrix) and fitting GS models in R using packages such as BGLR and ASReml-R, 4) performing validation and cross-validation of fitted models to compare and evaluate the performance of GS for a given trait, 5) report and implement GS outcomes for scientists and managers. In addition, in this workshop further consideration of the use of GS methods and its implementation in plant breeding programs will be discussed in order to facilitate its operational use. This will include: assessing where in a program genetic gains are achieved, and re-defining testing and model fitting to maximize benefits of genomic selection. Some of the GS methods presented will be: BayesB, RKHS, and GBLUP. In this workshop you will learn the basics of data and software commands to fit GS models, and in interpretation and implementation of GS models.

Fee: $165 - Includes software license and handbook; Contact: sgezan@ufl.edu

Elemental Analysis Solutions for Farm-to-Table Safety, Quality and Sustainability
Monday, 9:00 am-12:00 pm
PCC, Room 227 B

Safe and nutritious food is of primary concern to everyone, from the farm to the table. The recent prevalence of contaminants and adulterated, counterfeit or fraudulent food has led to an increase in public awareness and government regulations. This workshop will focus on simple, routine and sophisticated science-based elemental analysis solutions for a reliable, precise, accurate and harmonious global decision making process for safe and nutritious food. These analysis methods can provide actionable results at any stage of the food production process – from the presence of required elemental nutrients to threats from elemental and metal contaminants. This workshop includes technology and method overviews, hands-on learning and interaction with experts.

Methods for the laboratory, factory and field will be presented. Two primary areas will be focused on: 1. Elemental
content determination, characterization and profiling for sustainable and healthy soil, crops and food. 2. Quality and hazardous elemental analysis at critical control points for food management and inspection in raw materials, processing and finished products.

Fee: $55; Contact: kimberly.russell@bruker.com

**Make a Compelling Science Message**

**Monday, 9:30 am-11:30 am and**
**Tuesday, 1:00 pm-3:00 pm and**
**Wednesday, 9:00 am-11:00 am**

Sheraton, Maryvale B

Have you ever thought: I wish people understood what I did? Or: Why doesn’t everyone value my science? We designed this workshop to help you…and our Society…develop clear science messages for the public. In this workshop, you will learn how to:

- define your audiences
- create compelling messages for each audience
- frame your messages to be audience-relatable
- generate story ideas that interest journalists

Fee: $30; Contact: sfisk@sciencesocieties.org

**Generation Image—Photography 101 for Communicating Lab Research—Monday**

**Monday, 1:00 pm-3:00 pm and**
**Tuesday, 9:30 am-11:30 am**

Sheraton, Maryvale B

In today’s news, headlines and stories are shorter. The average length of a YouTube video is 3 minutes for a good reason – more people watch shorter videos (sadly, especially of cats). The fact is, the world is moving to brevity. We’ve gone from baby boomers, to Gen X and Y, Millennials, and now “Generation Image.” That’s what today’s public wants, so how can scientists give it to them?

In this workshop you will learn:

- The various types of photos that can help communicate your research
- The tools you need (I promise, it’s not expensive)
- How to manage all your photos efficiently
- How to use the photos to communicate what you do

Fee: $40; Contact: sfisk@sciencesocieties.org

**Women in Science Workshop on Leadership/Reception**

Sponsored by Bio Huma Netics, Inc. and Monsanto

**Tuesday, 1:30 pm-4:15 pm**

PCC, Room 229 AB

Sponsored by ACS526, Women in Science Committee

The workshop will involve presentations by Michael S. Seaver (an executive coach and leadership consultant from Seaver Consulting LLC), a group activity, and an in-depth look at leadership best practices. It includes material about the seven styles of leadership, building trust through meaningful relationships, and inspirational stories of successful leaders. Reception and round table discussion will follow the presentation. The objectives of the session are to:

- Allow participants to gain career advice and insight into leadership opportunities in the societies.
- Provide a unique opportunity for students to network with established scientists and tri-society leadership.

The workshop will cover:

- **Styles of Leadership** - Michael will share information about and examples of the seven styles of leadership - charismatic, participative, situational, transactional, transformational, quiet, and servant - and facilitate a group activity where respective groups are assigned a specific style and are asked to describe certain personality traits of that leadership style.

- **Building Relationships** - Michael will share trust-building best practices that attendees can take away and implement rapidly. After the lecture, attendees will be split into groups to brainstorm specific methods for opening lines of communication, managing time, sharing resources, and more.

- **Inspirational Leaders’ Stories** - Michael will provide examples of successful women and share insights into milestones along their respective journeys. Case studies about how diversity benefits organizations may also be referenced.

Member Fee: $40
Non-Member Fee: $50
Student Member Fee: $25 - limited number available;
Contact: hero.gollany@ars.usda.gov
Use the session number to the left of the title to locate the full session listing in the body of the program book. This will provide the time, date, and location of the CEU approved sessions.

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<th>Session #</th>
<th>CEUs</th>
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<td>20</td>
<td>Agronomic Production Systems</td>
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C09 Biomedical, Health-Beneficial and Nutritionally Enhanced Plants

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Consulting Soil Scientists

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Forest, Range and Wildland Soils

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Nutrient Management & Soil & Plant Analysis

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Pedology

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2016 Extension Education Community Educational Materials Awards Program
The Extension Education Community received 36 entries in 5 topic areas to recognize excellence in Extension materials. The lead judges for the Extension Educational Materials Awards were Josh Lofton, Mark Licht, Abbey Wick, Doug Shoup, Justin Moss and Daniel Fromme. Winning submissions will be on display at the Extension Education booth in the Exhibit Hall.

Newsletters
- No entries.

Videos

Digital Decision Aids

Websites, Blogs, and Social Media
@OSU_NPK, Twitter. Oklahoma State Univ. Brian Arnall. Mississippi Soybean Promotion Board. Larry Heathery.

Publications <16 pages continued...

Publications > 16 pages
Soil health in field and forage crop production. Penn State University. Sjoerd Duiker, Joel Myers, and Lisa Blazure.

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American Falls, ID  
Website: www.ams-samplers.com

AMS, Inc., is a leading manufacturer & provider of high-quality sampling equipment. AMS sampling equipment is primarily used for environmental, geological, and remediation uses as well as soil, soil gas, and groundwater monitoring, but also provides simple solutions for a variety of fields, including the agricultural industry.

Analytik Jena US  Booth: 707  
Woburn, MA  
Website: www.analytik-jena.com

Analytik Jena is a leading provider of high-end analytical measuring technology, of instruments and products in the fields of biotechnology and molecular diagnostics, as well as of high quality liquid handling and automation technologies. Its portfolio includes traditional analytical technology, particularly to measure concentrations of elements and molecules, as well as systems for bioanalytical applications in the Life Science area spanning the highly complex analytical cycle of a sample from sample preparation to detection. Automated high-throughput screening systems for the pharmaceutical sector are also part of this segment's extensive portfolio. Comprehensive laboratory software management and information systems (LIMS), services, as well as device-specific consumables and disposables, such as reagents or plastic articles, complete the Group's extensive range of products. Analytik Jena is part of the Swiss Endress+Hauser Group.

Apogee Instruments  Booth: 632  
Logan, UT  
Website: www.apogeeinstruments.com

Apogee develops and builds cost-effective, research-grade environmental sensors for use in agriculture, meteorology, and renewable energy. Founded in 1996 by Dr. Bruce Bugbee in Logan, Utah, Apogee’s product lines include pyranometers, pyrgeometers, net radiometers, quantum sensors, spectroradiometers, infrared radiometers, oxygen sensors, temperature sensors, chlorophyll meters, aspirated radiation shields, and more.

ASA, CSSA, & SSSA Society Center  Booth: 312  
See page 18 for description.

BioChambers Inc.  Booth: 333  
Winnipeg, MB  
Website: www.biochambers.com

At BioChambers our primary focus is on building positive client experiences. We achieve this by delivering top of class reach-in chambers and walk-in rooms specifically engineered for plant growth, tissue culture or seed germination research, providing excellent after sales service and introducing innovative designs to
the marketplace. If you are interested in learning more about our plant growth, tissue culture or seed germination chambers or about the features found in our low temperature series of chambers we invite you stop by our booth to discuss your specific research needs.

**Bruker**

Kennewick, WA  
**Website:** [www.bruker.com](http://www.bruker.com)  
Bruker is known worldwide as a leader in X-ray analysis equipment ranging from handheld XRF analyzers to large XRF and XRD spectrometers. As a leader in field-portable XRF spectrometry, Bruker’s Tracer series can be used for a wide variety of AgriScience applications including soil pollutants, nutrient measurement and crop treatment.

**CABI**

Sterling, VA  
**Website:** [www.styluspub.com](http://www.styluspub.com)  
CABI (Centre for Agriculture and Biosciences International) is an international not-for-profit organization that improves people’s lives worldwide by providing information and applying scientific expertise to solve problems in agriculture and the environment.

**Cambridge University Press**

New York, NY  
**Website:** [www.cambridge.org/academic](http://www.cambridge.org/academic)  
Cambridge University Press is a not-for-profit organization that dates from 1534 and is part of the University of Cambridge. Our mission is to unlock people’s potential with the best learning and research solutions by combining state-of-the-art content with the highest standards of scholarship, writing and production. Visit our stand to browse new titles, available at 20% discount, and pick up free journal sample copies.

**Campbell Scientific, Inc.**

Logan, UT  
**Website:** [www.campbellsic.com](http://www.campbellsic.com)  
For over 40 years, Campbell Scientific has earned a reputation for manufacturing rugged and reliable, low-powered dataloggers for long-term, stand-alone monitoring. Our flexible measurement systems are used worldwide in crop science, soil science, and agronomic applications. Solutions include measurement of gas and energy fluxes, soil water potential, soil water content, and water quality. A wide range of data communication and software options are available, including secure cloud-based data retrieval, display, and archive (Konect GDS). Stop by booth #622 to see our latest products and solutions, including the new CR300 Datalogger and TDR200 Time-Domain Reflectometer.  
Campbell Scientific—When Measurements Matter

**CE Elantech Inc.**

Lakewood, NJ  
**Website:** [www.ceelantech.com](http://www.ceelantech.com)

**Center for Agroforestry**

Columbia, MO  
**Website:** [www.centerforagroforestry.org](http://www.centerforagroforestry.org)  
The Center for Agroforestry at the University of Missouri (UMCA), established in 1998, is one the world’s leading centers contributing to the science underlying integrated practices of agroforestry, a form of intensive land-use management combining trees and/or shrubs with crops and/or livestock. These practices enhance land and aquatic habitats and improve biodiversity while sustaining land resources for generations to come. The major goal of the MU Center for Agroforestry is to support the long-term future of the family farm and forests by achieving economic, environmental, and social sustainability.

**CID Bio-science**

Camas, WA  
**Website:** [www.cid-inc.com](http://www.cid-inc.com)  
CID Bio-Science designs, engineers, and manufactures instruments for plant scientists. From photosynthesis analysis and leaf area measurement, to leaf spectroscopy and root imaging, our portable, durable tools provide the data you need wherever you need it—from inside the lab to out in the field.

To learn more or make an appointment to meet with us, visit Booth #713, or contact us at sales@cid-inc.com

**Conviron**

Winnipeg, MB  
**Website:** [www.conviron.com](http://www.conviron.com)  
Conviron is the world leader in the design, manufacture and installation of controlled environments. Conviron’s reach-in plant growth chambers, walk-in rooms and Argus Control Systems (a Conviron company) provide precise, uniform, and repeatable control of temperature, light, humidity, dehumidification, CO2, and other environmental conditions. Applications include plant growth, entomology, germination and other research where tight environmental controls are required.

**CRC Press/Taylor & Francis Group**

Boca Raton, FL  
**Website:** [www.crcpress.com](http://www.crcpress.com)  
CRC Press – Taylor & Francis Group is a premier publisher of books, journals, and electronic databases in the fields of Agronomy, Crop Science, and Soil Science. Visit our booth and view our latest publications and take advantage of special show offers, sample journals, as well as enter our raffle. Interested authors and researchers are also invited to contact us to find out how they can have their work published or contribute to our industry leading books and journal platforms. For more information visit [www.crcpress.com](http://www.crcpress.com).
Exhibitors

Crop X
Sacramento, CA
Website: www.cropx.com

Daiki Rika Kogyo Co., Ltd.
Kounosu Shi, Japan
Website: www.daiki.co.jp
  DIK-3210 iTensiometer
  DIK-5532 iPenetrometer
  DIK-1150 Digital actual volumenometer
  For video exhibition
  DIK-2610 Dust shield mill and sieve for soil RK4 II
  DIK-6000 Rainfall simulator

Dairy One
Ithaca, NY
Website: www.dairyone.com

Davis Instruments
Hayward, CA
Website: www.davisnet.com
  Located in the San Francisco Bay Area, Davis Instruments has been leading the development of precision weather instruments since 1963. Davis products are high-quality and affordable. Davis helps farmers increase crop yield by providing real-time weather conditions from the farm. With products such as GroWeather®, farmers can solve some key problems before they happen. Farmers can use this data to predict conditions that cause frost damage, pinpoint irrigation needs based on soil moisture & evapotranspiration, predict pest risks, forecast harvest days and track chilling hours.
  For more information about Davis Instruments and all of the Davis products visit www.davisnet.com.

Delta-T Devices
Burwell, Cambsm UK
Website: www.delta-t.co.uk

Dow AgroSciences
Indianapolis, IN
Website: www.dowagro.com
  Dow AgroSciences discovers, develops, and brings to market crop protection and plant biotechnology solutions for the growing world. Based in Indianapolis, Indiana, USA, Dow AgroSciences is a wholly owned subsidiary of The Dow Chemical Company and had annual global sales of $6.4 billion in 2015. Learn more at www.dowagro.com.

Dynamax, Inc.
Houston, TX
Website: www.dynamax.com
  Dynamax, Inc. is a primary source of equipment for plant water relations, weather, and productivity measurement, and is the world’s leading producer of sap flow systems and sensors for measuring plant water use directly. As the US distributor for Delta-T Devices, Gill Instruments and Force-A, we offer a wide range of products for soil, crop and environmental sciences. We are introducing the SapIP wireless system and the SapIP-IRT IR leaf temperature and irrigation management system. Delta-T will present the new GP2 “intelligent” data logger and Gill will be demonstrating the new MetStream WiFi logger.

EA Consumables
Pennsauken, NJ
Website: www.Eaconsumables.com
  Elemental analyzer consumables for:
  EA Consumables Inc. stocks and distributes the full range of Elemental Micoanalysis products for users throughout the US. Easy to use WebShop at www.EA-Consumables.com
  Our product range and quality are acknowledged worldwide, and with our ‘total satisfaction guarantee’ you can try our products risk-free.
  Please ask about our extensive range of compositional as well as isotopic standard materials.
  We offer equal or superior quality with significant savings versus the original equipment manufacturer.

Eijkelkamp
Morrisville, NC
Website: www.eijkelkamp-usa.com

Elementar Americas
Mt. Laurel, NJ
Website: www.elementaramericas.com
  The preferred analyzer for soil and plant scientists.
    Imagine Carbon, Nitrogen, Sulfur, Hydrogen analyzers for Soil, Food & Feed with the smallest footprint, most options and minimal maintenance.
    TOC, CN, TN, Tnb, ROC, TP, C, N, S, and H are all covered in the Elementar line, the widest range of analyzers in the field. Any size, any sample, no limits.
    Please visit us in booth 218 and let us know how we can help!

Elsevier
North Babylon, NY
Website: www.elsevier.com

FIAlab Instruments Inc.
Seattle, WA
Website: www.flowinjection.com
  FIAlab Instruments Inc. is a manufacturer of fully automated flow injection analyzers for nutrient assays, such as nitrate/nitrite, phosphate, ammonia, and many others.
Exhibitors

Freezerworks Booth: 219
Mountlake Terrace, WA
Website: www.freezerworks.com

Gasmet Technologies Inc. Booth: 723
Toronto, ON
Website: www.gasmet.com

Gasmet’s rugged FTIR multi-gas analyzers provide exceptional analytical precision for researchers measuring soil gas fluxes in the field measuring CO2, Methane, Nitrous Oxide, Water Vapor & Ammonia gases simultaneously with sub-ppm detection levels. The portable FTIR Gas Analyzers are light-weight and compact for easy field transport and the CalcmetTM Software provides an easy-to-use interface for researchers to view multiple gases in near real-time. Stop by booth 723 and see for yourself what other soil scientists are talking about where their research is benefitting from the Gasmet FTIR’s low cost of ownership, high accuracy and significant advantage in field productivity of data collection.

Gylling Data Management Booth: 301
Brookings, SD
Website: www.gmdata.com

Gylling Data Management has been providing research management software since 1982. See the new ARM 2016 used to establish, manage, analyze, and report information for crop experiments including field and greenhouse protocols and trials. Also the new HarvestMaster Mesa2 Tablet Data Collector: enter and analyze assessments, take plot pictures, and record trial GPS locations. ST: summarize and report a trial series across locations and/or years; links with Trial Database to select trials based on information in any trial data entry field.

HALDRUP USA Booth: 815
Ossian, IN
Website: www.haldrup.net

For nearly 50 years, HALDRUP has provided superior and customized solutions to breeders, field research institutes, and agri-science businesses from all around the world through the development and production of the most durable and precise machines in the industry. HALDRUP’s commitment to the American market can be seen in our decision to establish a new sales, service, and assembly plant in Northeastern Indiana. Our highly qualified team is here to support you with world-class service: assisting you in your endeavors to achieve the best possible results for your field research.

Harvest Master Booth: 307
Logan, UT
Website: www.harvestmaster.com

Designed and manufactured by Juniper Systems, HarvestMaster products significantly improve efficiency and data accuracy for agricultural research applications. HarvestMaster GrainGages® precisely collect on-combine grain measurement data on a wide variety of crops. HarvestMaster’s Murus™ software makes data collection easy, providing users with the best data collection experience possible.

Holland Scientific Booth: 207
Lincoln, NE
Website: www.hollandscientific.com

Holland Scientific, Inc. designs, manufactures and markets a broad line of high performance ground-based and aerial remote sensing instrumentation. We specialize in developing emerging technologies for the agricultural and environmental sciences. Please visit Holland Scientific’s booth to see our new line of real-time crop sensor products which include the Crop Circle™ ACS-211, ACS-225 and ACS-430 plant canopy sensors, RapidSCAN CS-45, Crop Circle™ ACS-470 spectrally configurable plant canopy sensor and GeoSCOUT X data logger.

Humic Products Trade Association Booth: 325
Spring Green, WI
Website: www.humictrade.org

The Humic Products Trade Association (HTPA) promotes the commercial trade of humic products through scientific cooperation and industry standardization. HPTA is cooperating with the International Humic Substance Society (IHSS) to develop a method to measure humic and fulvic acids.

Scientists and industry leaders are encouraged to join HPTA to promote professional and ethical advancement of humic substances. Members pay a key role in establishing HPTA standards, enabling the association to approach regulatory communities for product approval. Members also have access to education and training, networking opportunities and a literature database.

For more information, visit members at our booth. www.humictrade.org

Infinite Trading Inc. Booth: 226
Las Vegas, NV
Website:

Infinite Trading Inc. is proud to offer a full line of seed counting and packaging equipment. Our products are Seed Counters for ALL types of seeds for counting requirements and for packeting by count. This also includes Weigh/Count systems for automatic determination of the number of seeds/gram, ounce, or pound. New for this show is a 4 packet unit specifically for seed testing labs for any seed from small grasses to field crops and lima beans.

International Marketing & Design Booth: 203
Peachtree Corners, GA
Website: www.seedcounters.com

Our products are Seed Counters for ALL types of seeds for counting requirements and for packeting by count. This also includes Weigh/Count systems for automatic determination of the number of seeds/gram, ounce, or pound. New for this show is a 4 packet unit specifically for seed testing labs for any seed from small grasses to field crops and lima beans.
Exhibitors

International Plant Nutrition Institute **Booth: 323**
Norcross, GA
*Website:* www.ipni.net
The International Plant Nutrition Institute (IPNI) is a not-for-profit, science-based organization dedicated to the responsible management of plant nutrition for the benefit of the human family. IPNI has regional programs across the globe with initiatives addressing the world's growing need for food, fuel, fiber, and feed. Through cooperation and partnering with other institutions around the world, IPNI can add its strengths to local agronomic research, education, demonstrations, training, and other endeavors. For more information visit www.ipni.net or follow us on Twitter at @plantnutrition.

IRROMETER Company, Inc. **Booth: 615**
Riverside, CA
*Website:* www.irrometer.com
IRROMETER Company, Inc. of Riverside, California has been manufacturing soil moisture measurement and control equipment to optimize irrigation since 1951. IRROMETER tensiometers and WATERMARK Soil Moisture Sensors are in use for research, production agriculture, landscape water management and environmental applications worldwide. Soil moisture scheduling is a widely recognized method of efficiently applying irrigation water, increasing yield and quality as well as preventing the leaching of applied nutrients. IRROMETER also offers an extensive line of Soil Solution Access Tubes, or suction lysimeters, used in suction extract analysis of soil water for nutrient management and environmental sampling.

Kincaid Equipment **Booth: 724**
Haven, KS
*Website:* www.kincaidequipment.com

Kingenta Ecological Engineering Group Co. Ltd. **Booth: 719**
Linyi, China
*Website:* www.kingenta.com

LECO Corporation **Booth: 200**
St. Joseph, MI
*Website:* www.leco.com

LI-COR Biosciences **Booth: 300**
Lincoln, NE
*Website:* www.licor.com/env
Visit LI-COR's booth (300) to see the latest instrumentation for environmental research, including the LI-6800 Portable Photosynthesis System, the LI-8100A Soil Gas Flux System, radiation sensors, leaf area measurement equipment, and complete eddy covariance systems. LI-COR will demonstrate new solutions for interfacing trace gas analyzers into the LI-8100A System, to collect data which can be processed using SoilFluxPro™ Software to compute fluxes of these additional gases. The exciting new LI-6800 features improved gas analyzer precision, light source uniformity, flow path design, environmental controls, and a larger leaf aperture, coupled with a touch screen interface that provides real-time guidance from the instrument.

METER **Booth: 400**
Pullman, WA
*Website:* metergroup.com
After years of collaboration, Decagon and UMS have formalized their relationship by merging. In doing so, we have adopted a new name. We are excited to present our new company, METER, at the 2016 Tri-Societies meeting. METER Environment combines scientific and engineering expertise to create systems for measuring water along the soil-plant-atmosphere continuum. This year, we are presenting several new products, including an all-in-one weather station, solar-powered data logger with cell communication and an automated soil particle size analyzer. Please stop by our booth to see these and other new products.

MicaSense, Inc. **Booth: 604**
Seattle, WA
*Website:* www.micasense.com

Midco Global, Inc **Booth: 216**
Kirkwood, MO
*Website:* www.midcoglobal.com
Midco Global Inc., leading provider of research supplies, offers a wide selection of planting, pollinating, and harvest supplies.
In addition Midco Global offers a line of Dubois seed counting systems, seed treaters, seed packet printers and stake printers. Some of the new items for 2016 include tri-fold seed envelopes, stake planter and colored boxes. We look forward to working with you.

MIDI, Inc. **Booth: 202**
Newark, DE
*Website:* www.midi-inc.com
MIDI, Inc. has been providing microbial identification and fatty acid analysis solutions since 1991. Our novel phospholipid fatty acid analysis (PLFA) extraction procedure and analysis tools enable you to take a “snapshot” of your microbial community profile and biomass size. The system is available for purchase or for contract service.

Monsanto **Booth: 502**
St. Louis, MO
*Website:* www.monsanto.com
Monsanto is a leading global provider of technology-based solutions and agricultural products that improve farm productivity and food quality. We work alongside farmers to make agriculture more sustainable. To produce more food, to conserve more resources and to im-
prove lives. We do this by selling seeds, traits developed through biotechnology, and crop protection chemicals. Learn more about our business and our commitments at www.monsanto.com

MP Biomedicals  
Booth: 733  
Santa Ana, CA  
Website: www.mpbio.com

Nutrient Star  
Booth: 335  
Montpelier, OH  
Website: www.nutrientstar.org  

NutrientStar is an independent, science-based program that assesses and reports publicly on the performance of commercially available nutrient management tools. Environmental Defense Fund launched the program in March 2016 together with leading ag consultants and prominent crop, soils and agronomy scientists from across the country. Primary audiences are farmers, advisors and food supply chain companies interested in understanding which tools can deliver improved nutrient management for sustainable sourcing goals. Ultimately, NutrientStar will aid fertilizer optimization in commodity crop agriculture by elevating research standards, promoting industry transparency and improving farmers’ access to unbiased education and information about NUE tools and products.

Opti-Sciences Inc.  
Booth: 516  
Hudson, NH  
Website: www.optisci.com  

Opti-Sciences Inc. Booth 516 – Introducing a “revolutionary monitor chlorophyll fluorometer system” designed to monitor several plants, 24 hours a day, 7 days a week, over long periods of time. This new design allows automated measurement of the more standard measuring parameters and “automated daylight dark adaptation” to measure qE, the xanthophyll cycle, qM, or chloroplast migration, qI, or state transitions qL, or photoinhibition, and pNPQ, or photoprotective NPQ, at various times during the day. Also see the latest in photosynthesis measuring equipment, portable chlorophyll fluorometers, chlorophyll content meters, an anthocyanin content meter, a leaf area meter, and soil respiration equipment.

PICARRO, INC.  
Booth: 209  
Santa Clara, CA  
Website: www.picarro.com  

Spectroscopy (CRDS) is at the heart of all Picarro instruments enabling 100’s of scientists worldwide to detect target molecules at parts per billion or better resolution realtime, in the field or in the lab.

Polytec, Inc.  
Booth: 303  
Hopkinton, MA  
Website: www.analytics-online.com

PP Systems  
Booth: 613  
Amesbury, MA  
Website: www.pp-systems.com  

See why more researchers are turning to the CIRAS-3 Portable Photosynthesis & Chlorophyll Fluorescence System. When you compare technical specification, portability, performance, reliability and price you won’t find a better system for high level field research. We are also excited to introduce our NEW TARGAS-1 Portable Photosynthesis System and NEW EGM-5 Portable CO2 Gas Analyzer for measurement of soil and net canopy flux. Check out the NEW MaxiMet compact weather stations from Gill Instruments that are user configurable to measure a number of meteorological parameters. PP Systems is also the proud distributor for Hansatech Instruments; Skye Instruments; Gill Instruments; & bbe Moldaenke.

RD4AG  
Booth: 217  
Yuma, AZ  
Website: www.rd4ag.com  

Celebrating 33 years of Excellence in Agricultural Contract Research in 2016, we are committed to providing a full range of field oriented services to the evolving Seed and Crop Protection segments of Agriculture. Based in Southwest Arizona and Central Montana, RD4AG provides a year around growing environment where we can produce most any non-tropical crop

Seed Research Equipment Solutions (SRES)  
Booth: 616  
South Hutchinson, KS  
Website: www.sresweb.org  

SRES is the only planter manufacturer that concentrates totally on research plot planting. We build custom planters to fit your planting needs. Don’t settle for research that is just good enough, trust a research planter that is known for precision planting and technology. SRES – If it’s a seed, we can plant it.

senseFly, Inc.  
Booth: 729  
Fort Dodge, IA  
Website: www.sensefly.com  

At senseFly, we develop and produce aerial imaging drones for professional applications. Safe, ultra-light and easy to use, these highly automated data collection tools are employed by customers around the world in fields such as agriculture, surveying, GIS, industrial inspection, mining and humanitarian aid.
Sentek Technologies
Stepney, South Australia
Website: www.sentek.com.au
Sentek Technologies is an award-winning company that has been leading the world for over 25 years in designing, developing, manufacturing and globally distributing solutions for precision measurement and management of soil moisture and salinity. Sentek’s technology is used to visualise the dynamics of the plant-water-salt-soil-atmosphere interactions, and provides insights in many research areas.

Soil Health Partnership
Chesterfield, MO
Website: www.soilhealthpartnership.org
The Soil Health Partnership brings together diverse partner organizations including commodity groups, federal agencies, universities and environmental groups to work toward the common goal of improving soil health. Over a period of at least 10 years, the SHP will identify, test and measure farm management practices that improve soil health and benefit farmers. The results of this farmer-led project will provide a platform for sharing peer-to-peer information, and lend resources to benefit agricultural sustainability and profitability. An initiative of the National Corn Growers Association, the SHP sets a foundation for greater understanding and implementation of agricultural practices to protect resources for future generations. For more, visit soilhealthpartnership.org.

Soil Measurement Systems LLC
Huntington Beach, CA
Website: www.soilmeasurement.com
Soil Measurement Systems will display equipment for hydraulic characterization of soils in the field and in the laboratory. Included in the display are tension infiltrometers, an automated ring infiltrometer, borehole infiltrometers, soil tensiometers with pressure transducers, cone penetrometers, different sized soil columns, a battery powered vacuum pump, and suction lysimeters for monitoring the vadose zone. Examples are presented for determining water retention curves, saturated and unsaturated hydraulic conductivities, and movement of contaminants through soil.

SoilMoisture Equipment Corp.
Goleta, CA
Website: www.soilmoisture.com
For over 60 years, Soilmoisture has provided high quality equipment to the Agronomy, Soil Science, and Crop Science communities. SoilMoisture offers both field and lab research equipment for soil water retention analysis, permeability, soil water sampling, soil sampling, plant stress measurement, tensiometer measurement, TDR volumetric moisture content measurement, and more!

Spectral Evolution
Lawrence, MA
Website: www.spectralevolution.com
SPECTRAL EVOLUTION is a leading manufacturer of field portable and laboratory spectroradiometers and spectrometers for applications including geological remote sensing, ground truthing, spectral remote sensing, environmental and climate research, crop and soil research, vegetative studies, water body research including water quality and pollution studies, forestry and canopy studies, upwelling and downwelling measurement, and more. With the PSR+ the company offers the standard in field portable spectroradiometers with a 350-2500nm spectral range, the highest resolution and the best sensitivity (signal-to-noise ratio). With no internal moving optics, our instruments deliver long life and high reliability for in-situ spectroscopy measurements and analyses. www.spectralevolution.com

SPECTRO Analytical Instruments
Mahwah, NJ
Website: www.spectro.com
A member of the AMETEK Materials Analysis Division, SPECTRO Analytical Instruments is a worldwide leading supplier of ICP, ICP-MS and X-ray fluorescence spectrometry technology, used for the elemental analysis of materials in agriculture, agronomy, environmental, industry, research and academia. SPECTRO will feature the new SPECTRO ARCOS ICP-OES spectrometer with its unique MultiView plasma interface proving truly uncompromising Axial-View and Radial-View plasma observation in a single instrument for ultimate flexibility is sample analysis. SPECTRO offers a wide range of benchtop and field portable spectrometers such as the SPECTROSCOUT with lab quality analysis that goes anywhere. See more at www.spectro.com

Spectrum Technologies
Aurora, IL
Website: www.specmeters.com
Spectrum offers a full line of affordable measurement technology for soil moisture, soil compaction, nutrient levels, light, weather, and other factors directly affecting plant development. Our WatchDog weather station sensors include rainfall, light (solar, PAR, UV), wind, humidity, soil moisture, leaf wetness hours, and temperature while SpecWare software will calculate evapotranspiration, degree days and other weather events. Wi-Fi and cellular modems offer the ability to auto-send weather measurements to the web to view and store data, generate reports, and forecast disease / insect pressures with available models. Several of our portable FieldScout meters now offer Bluetooth capabilities to view live, map-centric data on a smart phone or pc. Over 15,000 customers have been relying on Spectrum's easy to use, dependable technology for over 29 years.
The Exhibitors

**Springer**  
New York, NY  
**Website:** www.springer.com

**Stevens Water Monitoring Systems, Inc.**  
Portland, OR  
**Website:** www.stevenswater.com  
STEVENS provides data collection solutions for scientific grade measurements of soil moisture, conductivity and temperature for Hydro-Meteorological and Agricultural applications. With the Hydra Probe Soil Sensor being one of the most widely used soil sensors worldwide, it is the only soil sensor with a 5 year warranty. Portable soil sensor technology includes the Hydra Probe FieldPortable and POGO Turf insight tool. Our cellular gateways include CellNET and eTracker providing innovative and simple solutions for collecting data directly from sensors and taking the data directly to the Cloud. Our technology has been proven in national climate reference networks and Hydro-Meteorological stations.

**The American Phytopathological Society**  
St. Paul, MN  
**Website:** www.apsnet.org  
The American Phytopathological Society (APS)  
APS booth #727 features two resources in its high-quality publications portfolio: A new open-access journal, PhytoBiomes, and the Plant Management Network. Learn about grant outreach through PMN… plus the exciting new phytobiomes discipline, its connection to the crop sciences, and the benefits of publishing in this pioneering transdisciplinary journal.

**The Climate Corporation**  
San Francisco, CA  
**Website:** www.climate.com  
The Climate Corporation aims to build a digitized world where every farmer is able to optimize and flawlessly execute every decision on the farm. The company’s proprietary Climate FieldView™ platform combines hyper-local weather monitoring, agronomic modeling, and high-resolution weather simulations to deliver Climate FieldView products, mobile SaaS solutions that help farmers improve profitability by making better informed operating and financing decisions. The company’s unique technologies help the global $3 trillion agriculture industry to stabilize and improve profits and, ultimately, help feed the world.

**USDA-NRCS**  
Washington, DC  
**Website:** soils.usda.gov  
USDA-NRCS, Soil Science Division is part of the National Cooperative Soil Survey, an effort of Federal and State agencies, universities, and professional societies to deliver science-based soil information.

**USPTO/PVPO**  
Alexandria, VA  
**Website:** uspto.gov

**Verder Scientific, Inc**  
Newton, PA  
**Website:** www.Verder-Scientific.com  

**Western Ag Innovations Inc**  
Saskatoon, SK  
**Website:** www.westernag.ca  
Western Ag Innovations provides Plant Root Simulator (PRS®) probes for in situ determination of soil nutrient supply.

**Willamette Exporting, Inc.**  
Portland, OR  
**Website:** www.europa.com/~wex  
Willamette Exporting provides commercial grain harvesting combines and crop binders for small acres and research plots. The combines are a head-threshing type for efficient power and clean grain. The binders tie bundles of the whole plant. In addition, threshing, hulling, grain polishing, and rice transplanting equipment are available.

**Wintersteiger**  
Salt Lake City, UT  
**Website:** www.wintersteiger.com  
Wintersteiger is the worldwide leader for agricultural field research equipment.  
On display is the new Quantum plot combine with many new innovative solutions. The Quantum sets new benchmarks in terms of throughput, user-friendliness and seed handling. Small lab equipment like stationary threshers, seed treaters and seed counters are also on display.

**Zurn Harvesting**  
Milaca, MN  
**Website:** www.zurnharvesting.com  
ZURN Harvesting offers a wide range of field research equipment. The ZURN 130 and ZURN 150, our universal plot combines, are used all over North America in all types of crops. Next to big cleaning surfaces and an ergonomic design the plot combines are well known for reliability and durability. Zurn Harvesting also offers high-clearance tool carriers designed for swathing, spraying, fertilizing and dividing of plots! Plot drills and planters complete the portfolio of ZURN Harvesting – a field research full-range supplier!
SCIENCE POLICY OFFICE PRESENTS

TUESDAY, NOVEMBER 8

ELECTION NIGHT WATCH PARTY

6-9PM ROOM 120 CONVENTION CENTER

LIVE ELECTION RESULTS
ELECTION TRIVIA CONTEST
PICTURES WITH THE CANDIDATES
MUCH MORE!
The Societies recognize the 2016 award recipients at Awards Ceremonies held during the Annual Meeting in Phoenix, AZ Nov. 6–9
A program within the Golden Opportunity Scholars Institute, sponsored by ASA and ICCA, supporting outstanding undergraduates in a B.S. or A.S. program who plan to enter the workforce upon graduation.
The Golden Opportunity Scholars Institute matches undergraduates with scientist-mentors. The program encourages students to pursue careers in the agronomic, crop, and soil sciences. It is supported by the Golden Opportunity Fund through the Agronomic Science Foundation.
Members of the Society nominate worthy colleagues based on their professional achievements and meritorious service. Up to 0.3% of the Society’s active and emeritus members may be elected Fellow.

Jane K. Dever  
Texas A&M AgriLife Research

Erik H. Ervin  
Virginia Tech

Hero T. Gollany  
USDA-ARS

Fred E. Below  
Univ. of Illinois

B. Todd Campbell  
USDA-ARS

Scott X. Chang  
Univ. of Alberta

Zhongqi He  
USDA-ARS

Jane M-F Johnson  
USDA-ARS

Stephen A. Prior  
USDA-ARS

Gregory W. Roth  
Pennsylvania State Univ.

Anil Shrestha  
California State Univ.-Fresno

Jirí Šimunek  
Univ. of California-Riverside

Janice E. Thies  
Cornell Univ.

Carlos G.S. Pedreira  
Univ. of Sao Paulo

B. Todd Campbell  
USDA-ARS

Fred E. Below  
Univ. of Illinois

Carl K. West  
Univ. of California-Riverside

J. Henry (Bud) Clark  
USDA-ARS

L.B. (Bert) McCarty  
Clemson Univ.

Janice E. Thies  
Cornell Univ.

Jim J. Wang  
Louisiana State Univ.

Congratulations  
2016 Fellow, Award, and Scholarship Recipients
Members of the Society nominate worthy colleagues based on their professional achievements and meritorious service. Up to 0.3% of the Society’s active and emeritus members may be elected Fellow.

Stacy A. Bonos
Rutgers Univ.

B. Todd Campbell
USDA-ARS

A. Susana Goggi
Iowa State Univ.

Richard D. Horsley
North Dakota State Univ.

Kimberlee K. Kidwell
Washington State Univ.

Carlos G.S. Pedreira
Univ. of Sao Paulo

Richard C. Pratt
New Mexico State Univ.

David M. Stelly
Texas A&M Univ.

John C. Stier
Univ. of Tennessee-Knoxville

Luther Talbert
Montana State Univ.

Jeffrey W. White
USDA-ARS

2016 Award Programs

Valley of the Sun, Sheraton Grand, second floor

SSSA Breakfast, Awards, and Plenary
Nyle C. Brady Frontiers of Soil Science Lectureship
Monday, Nov. 7, 7:00-9:00 am

ASA Breakfast, Awards and Plenary
E.T. & Vam York Distinguished ASA Lectureship
Tuesday, Nov. 8, 7:00-9:00 am

CSSA Breakfast, Awards, and Plenary
Betty Klepper Endowed Lectureship
Wednesday, Nov. 9, 7:00-9:00 am
Members of the Society nominate worthy colleagues based on their professional achievements and meritorious service. Up to 0.3% of the Society’s active and emeritus members may be elected Fellow.

Scott X. Chang
Univ. of Alberta

Timothy J. Clough
Lincoln Univ.

W. Lee Daniels
Virginia Tech

Alfred E. Hartemink
Univ. of Wisconsin-Madison

Carl J. Rosen
Univ. of Minnesota

Randall J. Schaetzl
Michigan State Univ.

Mary E. Stromberger
Colorado State Univ.

Janice E. Thies
Cornell Univ.

Markus Tuller
Univ. of Arizona

Harry Vereecken
Forschungszentrum Jülich

Michael H. Young
Univ. of Texas-Austin

Carl H. Bolster
USDA-ARS

Russell D. Briggs
SUNY-ESF

Barbara J. Cade-Menun
Agriculture & Agri-Food Canada
SAVE THE DATE

2017 MEETING
Tampa, FL | Oct. 22–25

Future Meetings
2018  ASA & CSSA
      Baltimore, MD, Nov. 4-7
      SSSA
      San Diego, CA, Jan. 6-9, 2019
2019  San Antonio, TX, Nov. 10-13
2020  Phoenix, AZ, Nov. 8-11

acsmeetings.org
Thank You

Many thanks to the nearly 2,000 member leaders who have made 2016 such a successful year for the Societies. Please pick up your “Member Leader” ribbon at the ASA, CSSA, SSSA desk in the Registration Center. ASA section chairs and community leaders, CSSA division chairs, SSSA division chairs, regional branch officers, and other leaders can be found online at:


Section/Community Business Meetings

<table>
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<th>ASA Section/Community</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
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<tr>
<td>ASA Community &amp; Section Feedback Meeting</td>
<td>Wednesday</td>
<td>3:00-4:00 PM</td>
<td>PCC, 129 AB</td>
</tr>
<tr>
<td>Agronomic Production Systems</td>
<td>Monday</td>
<td>3:20-4:20 PM</td>
<td>PCC, 126 A</td>
</tr>
<tr>
<td>Adaptive Nutrient Management</td>
<td>Monday</td>
<td>10:30-11:00 AM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Applied Soybean Research</td>
<td>Monday</td>
<td>3:15-4:00 PM</td>
<td>PCC, 125 A</td>
</tr>
<tr>
<td>Bioenergy Systems</td>
<td>Wednesday</td>
<td>11:00 AM-12:00 PM</td>
<td>PCC, 127 B</td>
</tr>
<tr>
<td>Cotton and Other Fibers</td>
<td>Sunday</td>
<td>4:50-5:30 PM</td>
<td>PCC, 221 B</td>
</tr>
<tr>
<td>Crop Irrigation Strategies and Management</td>
<td>Tuesday</td>
<td>11:10 AM-12:00 PM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Crop Management Professionals</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 231 C</td>
</tr>
<tr>
<td>Integrated Pest Management Professionals</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 231 C</td>
</tr>
<tr>
<td>Nutrient Management Professionals</td>
<td>Monday</td>
<td>11:00-11:30 AM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Organic Management Systems</td>
<td>Wednesday</td>
<td>1:30-2:30 PM</td>
<td>PCC, 225 A</td>
</tr>
<tr>
<td>Precision Agriculture Systems</td>
<td>Tuesday</td>
<td>11:30 AM-12:30 PM</td>
<td>PCC, 126C</td>
</tr>
<tr>
<td>Professional Applied Agronomists</td>
<td>Monday</td>
<td>4:10-4:40 PM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Semi-Arid Dryland Cropping Systems</td>
<td>Monday</td>
<td>10:45-11:45 AM</td>
<td>PCC, 124 B</td>
</tr>
<tr>
<td>Sensor-Based Nutrient Management</td>
<td>Wednesday</td>
<td>11:50 AM-12:20 PM</td>
<td>PCC, 231 B</td>
</tr>
<tr>
<td>Soil and Water Management Professionals</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 231 C</td>
</tr>
<tr>
<td>Solar Corridor Crop System</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 227 A</td>
</tr>
<tr>
<td>Weedy and Invasive Plant Species</td>
<td>Monday</td>
<td>3:35-3:45 PM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Biometry and Statistical Computing</td>
<td>Tuesday</td>
<td>4:00-4:50 PM</td>
<td>PCC, 221 C</td>
</tr>
<tr>
<td>Bioinformatics in Crops and Soils</td>
<td>Tuesday</td>
<td>4:00-4:50 PM</td>
<td>PCC, 221 C</td>
</tr>
<tr>
<td>Spatial Statistics Applications</td>
<td>Tuesday</td>
<td>4:00-4:50 PM</td>
<td>PCC, 221 C</td>
</tr>
<tr>
<td>Statistical Education/Training for Researchers</td>
<td>Tuesday</td>
<td>4:00-4:50 PM</td>
<td>PCC, 221 C</td>
</tr>
<tr>
<td>Climatology and Modeling</td>
<td>Tuesday</td>
<td>6:00-7:15 PM</td>
<td>PCC, 126C</td>
</tr>
<tr>
<td>Agroclimatology and Agronomic Modeling</td>
<td>Tuesday</td>
<td>7:15-7:30 PM</td>
<td>PCC, 126C</td>
</tr>
<tr>
<td>Airborne and Satellite Remote Sensing</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 228 A</td>
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<tr>
<td>Biophysical Measurements and Sensors</td>
<td>Monday</td>
<td>2:40-2:55 PM</td>
<td>PCC, 231 C</td>
</tr>
<tr>
<td>Evapotranspiration Measurement and Modeling</td>
<td>Tuesday</td>
<td>3:30-3:45 PM</td>
<td>PCC, 126 A</td>
</tr>
<tr>
<td>Global Climate Change</td>
<td>Wednesday</td>
<td>3:35-4:00 PM</td>
<td>PCC, 228 A</td>
</tr>
<tr>
<td>Model Applications in Field Research</td>
<td>Wednesday</td>
<td>10:35-10:50 AM</td>
<td>PCC, 228 B</td>
</tr>
<tr>
<td>Sensor-Based Water Management</td>
<td>Tuesday</td>
<td>3:35-4:05 PM</td>
<td>PCC, 126 B</td>
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<tr>
<td>Soil-Plant-Water Relations</td>
<td>Wednesday</td>
<td>3:35-4:05 PM</td>
<td>PCC, 228 B</td>
</tr>
<tr>
<td>Education and Extension</td>
<td>Wednesday</td>
<td>9:50-10:50 AM</td>
<td>PCC, 225 B</td>
</tr>
<tr>
<td>Advancing Agronomy via Public-Private Collaboration</td>
<td>Monday</td>
<td>3:00-4:00 PM</td>
<td>PCC, 127 B</td>
</tr>
<tr>
<td>Extension Education</td>
<td>Tuesday</td>
<td>11:00 AM-12:00 PM</td>
<td>PCC, 226 A</td>
</tr>
<tr>
<td>K-12 Outreach and Activities</td>
<td>Wednesday</td>
<td>9:35-9:50 AM</td>
<td>PCC, 225 A</td>
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</tbody>
</table>
## Section/Division Business Meetings

<table>
<thead>
<tr>
<th>Event</th>
<th>Day</th>
<th>Time</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Media in Education/Extension</td>
<td>Monday</td>
<td>10:15-10:45 AM</td>
<td>PCC, 127 A</td>
</tr>
<tr>
<td>Undergraduate Education</td>
<td>Tuesday</td>
<td>11:00 AM-12:00 PM</td>
<td>PCC, 226 B</td>
</tr>
<tr>
<td><strong>Environmental Quality</strong></td>
<td><strong>Wednesday</strong></td>
<td><strong>11:15 AM-12:00 PM</strong></td>
<td><strong>PCC, 122 A</strong></td>
</tr>
<tr>
<td>Animal Agriculture and the Environment</td>
<td>Wednesday</td>
<td>2:40-3:40 PM</td>
<td>PCC, 128 B</td>
</tr>
<tr>
<td>Biochar: Agronomic and Environmental Uses</td>
<td>Wednesday</td>
<td>1:30-2:30 PM</td>
<td>PCC, 127 C</td>
</tr>
<tr>
<td>By-product Gypsum Uses in Agriculture</td>
<td>Tuesday</td>
<td>11:00 AM-12:30 PM</td>
<td>PCC, 127 B</td>
</tr>
<tr>
<td>Nutrients and Environmental Quality</td>
<td>Wednesday</td>
<td>12:20-12:35 PM</td>
<td>PCC, 124 A</td>
</tr>
<tr>
<td>Soil Carbon and Greenhouse Gas Emissions</td>
<td>Tuesday</td>
<td>1:30-2:30 PM</td>
<td>PCC, 127 C</td>
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<tr>
<td>Sustainable Intensification</td>
<td>Monday</td>
<td>3:30-4:15 PM</td>
<td>PCC, 228 B</td>
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<tr>
<td><strong>Global Agronomy Section</strong></td>
<td><strong>Wednesday</strong></td>
<td><strong>1:30-2:30 PM</strong></td>
<td><strong>PCC, 226 B</strong></td>
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<tr>
<td>Agronomic Solutions for Smallholders</td>
<td>Tuesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 226 C</td>
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<tr>
<td>Agronomy in Africa</td>
<td>Wednesday</td>
<td>11:00 AM-12:30 PM</td>
<td>PCC, 226 A</td>
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<tr>
<td>Gaining Access to Agronomic Inputs</td>
<td>Monday</td>
<td>3:30-4:00 PM</td>
<td>PCC, 221 B</td>
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<tr>
<td>Global Digital Soil Map</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 226 B</td>
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<tr>
<td>Perennial Grain Development</td>
<td>Wednesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 226 A</td>
</tr>
<tr>
<td>Tropical Legumes</td>
<td>Tuesday</td>
<td>3:10-3:40 PM</td>
<td>PCC, 226 B</td>
</tr>
<tr>
<td>U.S.-Sino Agricultural Research Forum</td>
<td>Tuesday</td>
<td>1:30-2:00 PM</td>
<td>PCC, 226 C</td>
</tr>
<tr>
<td><strong>Land Management and Conservation</strong></td>
<td><strong>Tuesday</strong></td>
<td><strong>3:30-4:00 PM</strong></td>
<td><strong>PCC, 225 B</strong></td>
</tr>
<tr>
<td>Agricultural Experiment Station Management</td>
<td>Wednesday</td>
<td>10:00-10:30 AM</td>
<td>PCC, 221 B</td>
</tr>
<tr>
<td>Cover Crop Management</td>
<td>Wednesday</td>
<td>10:00-10:30 AM</td>
<td>PCC, 221 C</td>
</tr>
<tr>
<td>Military Land Use and Management</td>
<td>Tuesday</td>
<td>2:30-3:30 PM</td>
<td>PCC, 228 A</td>
</tr>
<tr>
<td>Soil Health</td>
<td>Tuesday</td>
<td>11:30 AM-12:00 PM</td>
<td>PCC, 221 A</td>
</tr>
<tr>
<td><strong>ASA Community &amp; Section Feedback Meeting</strong></td>
<td><strong>Wednesday</strong></td>
<td><strong>3:00-4:00 PM</strong></td>
<td><strong>PCC, 129 AB</strong></td>
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<tr>
<td><strong>CSSA Division</strong></td>
<td><strong>Day</strong></td>
<td><strong>Time</strong></td>
<td><strong>Location</strong></td>
</tr>
<tr>
<td>C01, Crop Breeding and Genetics</td>
<td>Wednesday</td>
<td>11:30 AM-12:30 PM</td>
<td>Sheraton, Valley of the Sun D</td>
</tr>
<tr>
<td>C02, Crop Physiology and Metabolism</td>
<td>Wednesday</td>
<td>11:30 AM-12:30 PM</td>
<td>Sheraton, Ahwatukee A</td>
</tr>
<tr>
<td>C03, Crop Ecology, Management and Quality</td>
<td>Wednesday</td>
<td>9:30 AM-12:00 PM</td>
<td>Sheraton, Camelback B</td>
</tr>
<tr>
<td>C04, Seed Physiology, Production and Technology</td>
<td>Monday</td>
<td>3:10-4:10 PM</td>
<td>PCC, 226 A</td>
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<tr>
<td>C05, Turfgrass Science</td>
<td>Wednesday</td>
<td>9:30-11:30 AM</td>
<td>Sheraton, Deer Valley</td>
</tr>
<tr>
<td>C06, Forage and Grazinglands</td>
<td>Wednesday</td>
<td>10:45-11:45 AM</td>
<td>Sheraton, Ahwatukee B</td>
</tr>
<tr>
<td>C07, Genomic, Molecular Genetics and Biotechnology</td>
<td>Wednesday</td>
<td>11:30 AM-12:30 PM</td>
<td>Sheraton, Valley of the Sun D</td>
</tr>
<tr>
<td>C08, Plant Genetic Resources</td>
<td>Tuesday</td>
<td>11:35 AM-12:30 PM</td>
<td>PCC, 122 BC</td>
</tr>
<tr>
<td>C09, Biomedical, Health-Beneficial and Nutritionally Enhanced Plants</td>
<td>Tuesday</td>
<td>11:40 AM-12:10 PM</td>
<td>PCC, 122 A</td>
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## SSSSA Division

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<tr>
<th>Event</th>
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<th>Time</th>
<th>Location</th>
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<tbody>
<tr>
<td>Consulting Soil Scientists</td>
<td>Sunday</td>
<td>3:00-5:30 PM</td>
<td>PCC, 227 C</td>
</tr>
<tr>
<td>Forest, Range, and Wildland Soils</td>
<td>Tuesday</td>
<td>3:15-4:15 PM</td>
<td>PCC, 132 B</td>
</tr>
<tr>
<td>Nutrient Management and Soil and Plant Analysis</td>
<td>Tuesday</td>
<td>4:00-5:00 PM</td>
<td>PCC, 129 B</td>
</tr>
<tr>
<td>Soil Pedology</td>
<td>Wednesday</td>
<td>9:30-11:00 AM</td>
<td>PCC, 126 B</td>
</tr>
<tr>
<td>Soil and Water Management and Conservation</td>
<td>Wednesday</td>
<td>1:30-2:30 PM</td>
<td>PCC, 127 B</td>
</tr>
<tr>
<td>Soil Biology and Biochemistry</td>
<td>Wednesday</td>
<td>3:30-4:30 PM</td>
<td>PCC, 124 A</td>
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<tr>
<td>Soil Chemistry</td>
<td>Tuesday</td>
<td>3:00-4:00 PM</td>
<td>PCC, 225 A</td>
</tr>
<tr>
<td>Soil Education and Outreach</td>
<td>Tuesday</td>
<td>10:00-11:30 AM</td>
<td>PCC, 231 B</td>
</tr>
<tr>
<td>Soil Fertility and Plant Nutrition</td>
<td>Tuesday</td>
<td>4:00-5:00 PM</td>
<td>PCC, 129 B</td>
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<tr>
<td>Soil Mineralogy</td>
<td>Tuesday</td>
<td>6:10-7:30 PM</td>
<td>PCC, 221 C</td>
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<tr>
<td>Soil Physics and Hydrology</td>
<td>Wednesday</td>
<td>11:00 AM-1:00 PM</td>
<td>PCC, 129 AB</td>
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<tr>
<td>Soils and Environmental Quality</td>
<td>Tuesday</td>
<td>6:10-7:30 PM</td>
<td>PCC, 228 B</td>
</tr>
<tr>
<td>Urban and Anthropogenic Soils</td>
<td>Tuesday</td>
<td>4:00-5:00 PM</td>
<td>PCC, 226 B</td>
</tr>
<tr>
<td>Wetland Soils</td>
<td>Tuesday</td>
<td>3:30-4:30 PM</td>
<td>PCC, 125 B</td>
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</table>
Saturday, Nov. 5

*W3128 Scaling Microirrigation Technologies to Address the Global Water Challenge—8:00 AM-5:00 PM, Hyatt, Ellis Room
ACSESS Board of Directors Meeting—1:00-4:00 PM, Sheraton, Deer Valley
Soil Science Certifying Board—4:00-6:30 PM, Hyatt, Moran Room

Sunday, Nov. 6

Moderator Training I—7:00-7:30 AM PCC, 221 C
*ARS-Grand Challenges—8:00 AM-2:00 PM, Sheraton, Laveen A
SSSA Board of Directors Meeting—8:00-11:00 AM, Sheraton, Deer Valley
*North American 4R Nutrient Stewardship Researchers Meeting—9:00 AM-3:00 PM, Hyatt, Remington Room
*NE-1438 Multistate Project Meeting—11:00 AM-3:00 PM, Sheraton, Laveen B
Moderator Training II—12:00-12:30 PM, PCC, 221 C
S302 SSSA Journal Technical Editors—1:00-2:00 PM, Sheraton, Deer Valley
*LCCB Meeting—2:00-6:00 PM, Sheraton, Maryvale A
S302 SSSA Journal New Editor Training—2:00-3:00 PM, Sheraton, Deer Valley
*USDA-ARS Gracenet/REAP & Associated Database Discussion Meeting—2:00-5:00 PM, PCC, 221 C
C312 Journal of Plant Registrations—2:00-2:45 PM, Sheraton, Laveen A
*W3128 Scaling Microirrigation Technologies to Address the Global Water Challenge—2:00-5:00 PM, Hyatt, Ellis Room
*AgMIP ET Model Intercomparison Discussion—3:00-5:00 PM, Sheraton, Laveen B
*Isee Project Meeting—3:00-5:00 PM, Sheraton, Ahwatukee B
*NCSRP Benchmarking Team Meeting—3:00-5:00 PM, Sheraton, Laveen A
S302 SSSA Journal Editorial Board—3:00-5:00 PM, Sheraton, Deer Valley

Department Heads/Chairs Roundtable—3:30-5:30 PM, Sheraton, Maryvale B
Golden Opportunity Scholars Orientation—3:45-4:45 PM, PCC, 226 C
Joint Meeting "Clover and Special Purpose Legumes" with "Forage and Turfgrass" Crop Germplasm Committees—5:00-7:30 PM, Sheraton, Laveen B

Monday, Nov. 7

Moderator Training III—7:00-7:30 AM, PCC, 221 C
Agronomic Science Foundation Board of Directors Meeting—10:00 AM-12:00 PM, Sheraton, Laveen B
AC315 Crop, Forage & Turfgrass Management Editorial Board—10:00 AM-12:00 PM, PCC, 226 A
ACS732 Annual Meeting Planning Committee—12:00-1:30 PM, PCC North, Chorus Room
Moderator Training IV—12:00-12:30 PM, PCC, 221 C
C302 Crop Science Technical Editors—1:00-2:00 PM, PCC, 232 C
C302 Crop Science Editorial Board—2:00-3:00 PM, PCC, 232 C
*USDA-ARS All Hands Meeting—2:00-4:00 PM, PCC, 122 BC
*Soil and Plant Council Board Meeting—3:00-5:00 PM, Sheraton, Laveen B
NAPT-PAP Oversight Committee s-890—3:30-6:00 PM, Sheraton, Deer Valley
ACS330 Agricultural & Environmental Letters Journal Editorial Board—4:30-5:30 PM, Sheraton, Laveen A
*Kingenta Fertilizer Technology Workshop—4:30-6:30 PM, PCC, 221 C
*Association of Agricultural Scientists of Indian Origin (AASIO) Annual Meeting—5:30-6:30 PM, PCC, 231 A
ACS324.1 Journal of Environmental Quality Technical Editors—5:30-6:30 PM, Sheraton, Laveen A
*Southern US Turfgrass Improvement Program – SCRI Project Meeting—6:00-8:00 PM, Sheraton, Laveen B
Soil Micromorphology Committee Business Meeting—6:30-7:30 PM, Sheraton, Laveen A
*Christian Fellowship—6:30-9:30 PM, Sheraton, Maryvale B
Wednesday, Nov. 9

ACS 238 Graduate Student Committee—7:00-8:30 AM, Sheraton, Camelback A
Moderator Training VII—7:00-7:30 AM, PCC, 221 C
ACS 530 Early Career Committee Meeting—8:00-8:50 AM, PCC, 129 B
*International Wheat Initiative Agronomy Expert Working Group—9:00-11:00 AM, PCC, 232 A
Crops & Soils Editorial Board Meeting—9:30-10:30 AM, Sheraton, Camelback A
ACS 324.1 Journal of Environmental Quality Editorial Board—10:00 AM-12:00 PM, Sheraton, Laveen B
*Ogallala Water CAP Project Meeting—11:00 AM-1:00 PM, Sheraton, Laveen A
Women in Science Committee Meeting—11:00 AM–12:00 PM, Sheraton, Camelback A

Thursday, Nov. 10

ASA Board of Directors Meeting—7:00-9:00 AM, Sheraton, Encanto A
*SERA-17 Meeting—7:30 AM-5:00 PM, Hyatt, Ellis Room
*Annual Meeting of the Global Research Alliance - Croplands Research Group—8:00 AM-5:00 PM, Hyatt, Regency Ballroom AB
CSSA Board of Directors Meeting—9:30-11:30 AM, Sheraton, Encanto B

*Denotes an activity that is not an official part of ASA, CSSA, and SSSA
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Social Media Contest Nov. 6-9, 2016

Connect with our Societies!

Use #ACSMtg when you post for a chance at the daily drawing for a gift certificate to an Annual Meeting vendor!

- Posts and Tweets will be shown during a “live feed” in Society Center;
- Please use your social media only in the Exhibit Hall or passageways;
- Please respect the lecturers and do not use your smartphones/tablets/computers to live post/tweet during their talks.

Winners announced daily at Society Center

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Society & Other Group Food Functions & Socials

Tickets may be available for purchase for Society food functions at On-Site Registration 48 hours prior to the function. Persons with special dietary needs please go to the Information/Dietary Needs/Ribbons at the Registration Center for assistance. Requests must be made 24 hours in advance.

Sunday, Nov. 6
Welcome Reception—7:00-9:00 PM, PCC, Exhibit Hall CDE

Monday, Nov. 7
† SSSA Breakfast, Awards, & Plenary (Nyle C. Brady Frontiers of Soil Science Lectureship)—7:00–9:00 AM, Sheraton Grand, Valley of the Sun ABC
*University of Minnesota Mixer—5:30-7:30 PM, Sheraton, Camelback B
*Purdue Boilermaker Reception—5:30-7:30 PM, Sheraton, Valley of the Sun D
*Colorado State University Alumni Reception—5:30-7:30 PM, Sheraton, Ahwatukee B
*University of Arkansas Pigout—5:30-7:00 PM, Sheraton, Camelback A
*Missouri Reception—6:00-8:00 PM, Sheraton, Valley of the Sun E
*All Illinois Mixer—6:00-8:00 PM, Sheraton, Ahwatukee A
*University of Florida Gator Gathering—6:00-8:00 PM, 1130 The Restaurant, 445 N. 3rd Street, Suite #1130
† Golden Opportunity Scholars Program—11:00 AM-1:00 PM, Sheraton, Ahwatukee AB
Science Policy Graduate Student Luncheon—12:00–1:30 PM, Sheraton Grand, Valley of the Sun DE
*Dow Agrosciences/University of Illinois Urbana Campaign Social—5:30-7:30 PM, Sheraton, Camelback A
*Kansas State University, Dept of Agronomy—5:30-7:30 PM, Sheraton, Ahwatukee B
*University of Nebraska-Lincoln Department of Agronomy & Horticulture, Big Red Mixer—6:30-8:30 PM, Sheraton, Ahwatukee A

Wednesday, Nov. 9
† CSSA Breakfast, Awards, & Plenary (Betty Klepper Endowed Lectureship)—7:00–9:00 AM, Sheraton Grand, Valley of the Sun ABC
Closing Reception—4:30–5:00 PM, PCC, Ballroom 120 B-D
*SER-A17 Mixer and Poster Session—5:00-7:00 PM, Hyatt, Ellis Room

Tuesday, Nov. 8
† Frank N. Meyer Medal for Plant Genetic Resources Breakfast and Award—6:30 AM-8:00 AM, Sheraton Grand, Maryvale B
† ASA Breakfast, Awards, & Plenary (E.T. & Vam York Distinguished ASA Lectureship)—7:00 AM-9:10 AM, Sheraton Grand, Valley of the Sun ABC

* Denotes an activity that is not an official part of ASA, CSSA, and SSSA
† Denotes ticket required to attend.