

2017 PENNSYLVANIA AGRONOMIC EDUCATION CONFERENCE



JANUARY 19-20, 2017
PENN STATER CONFERENCE CENTER
STATE COLLEGE, PA

Hosted by:
The Pennsylvania
Agronomic
Education Society



what you can expect

The Pennsylvania Agronomic Education Conference is a winter tradition for Pennsylvania's agronomy industry. This two-day educational event provides technical information for all aspects of crop production and allows industry, academia and state agency representatives to network and discuss the newest technologies and systems you can use when advising your Pennsylvania crop producer clientele.

In addition to the conference sessions, the annual business meeting of the Pennsylvania Agronomic Education Society will take place on Friday, January 20 during lunch. At this time the 2017 PAES Board will be elected and the Member of the Year announced.

cost

Full Conference registration includes meeting materials, lunches, breaks and Thursday evening hors d'oeuvres reception. Registration fee also includes a one-year membership in the Pennsylvania Agronomic Education Society, a \$25 value.

Two Day Early Bird Registration (On/Before 12-31-2016) **\$220**

Two Day Registration (After 12-31-2016 and Walk-Ins) **\$240**

One Day Registration **\$150**

Online registration (payable with credit card) is available at <http://www.cvent.com/d/svqrxn>.

For those who cannot participate in the conference, but would like to maintain membership in the Society, please use the **Membership only** section of the registration form to submit your dues. No other dues notification or reminder will be sent for this purpose.

PAES Membership Dues Only **\$25**

lodging

Our home for the Conference will be the Penn Stater Conference Center Hotel, located at 215 Innovation Blvd. near the Route 322 bypass. Attendees are responsible for making their own lodging arrangements by calling the hotel at (800) 233-7505. Room rates of \$99 plus tax per night/single occupancy apply when using Reservation Identification Number **PAEA17B** or referring to the conference name. *Room availability and rates cannot be guaranteed after **December 18, 2016***. Room cancellations must be made at least 72 hours prior to the arrival date to avoid a possible fee.

certification program credits

Continuing education credits for the following Pennsylvania certification programs and licenses will be requested and available where appropriate and approved:

- **Certified Crop Advisers**
- **Pennsylvania Pesticide Program**
- **Pennsylvania Nutrient Management Certification Program**

Credits listed are **pending**. Upon approval, credits will be listed on the appropriate certification program website. A full listing of credits will also be included in the daily agenda distributed at the Conference.

questions?

Contact Amy Bradford at 717-651-5920 or abradford@pennag.com. This information may be found online at www.agsci.psu.edu/paes/conference.

certified crop advisor app

The CCA program will continue using QR Codes as an alternative to sign-in sheets. Smartphone users should download the "Certified Crop Adviser" App by scanning the codes below or visiting iTunes (iPhone/iPad) and Play Store (Android) prior to arriving at the conference.

Please note you will need a QR Code Reader installed on your phone or tablet/IPAD prior to being able to access the App.

Contact Amy Bradford (abradford@pennag.com or 717-651-5920) for assistance.



iPhone



Android

agenda - thursday, january 19, 2017

8 am	<p align="center">Registration and Visit Exhibits <i>(Outside President's Hall)</i></p>
9 – 11:30 am	<p align="center">Welcome and General Session <i>Moderator – Larry Burkhart, Conference Chair</i> <i>(President's Hall 3&4)</i></p> <p>2016 Weather Recap and What's In Store for 2017 <i>Kyle Imhoff, Penn State University</i> A recap of weather across the United States (with a focus on Pennsylvania) for the calendar year 2016 will be presented. Additionally, a look ahead to the weather in 2017 will be discussed. Some long-range forecasting techniques will be highlighted to explain the process of seasonal forecasting. 0.5 CM CCA CEU</p> <p>Future of Precision Ag <i>Tim Norris, Ag Info Tech</i> Tim is going to take his 20 years of experience in Precision Ag and try to predict the future. There are many things left for us to monitor and control and he is going to share his experiences with new technology that is not widely adopted yet and give a glimpse of where he thinks Precision Ag is headed. 1.0 CM CCA CEU</p> <p>Our 5 Years with UAV (Drones) in AG—What We Didn't Know <i>Ken Sands, Four Seasons Crop Care, Inc.</i> Four Seasons Crop Care, Inc. has been using drones as a scouting and diagnostic tool in crops over the last 5 years. In this session Ken will share what they learned they didn't know about the use of drones, their potential, drawbacks and the learning curve associated with the technology. 0.5 CM CCA CEU</p> <p>Basics of Drift Management <i>Greg Kruger, University of Nebraska-Lincoln</i> Between this general session and Greg's breakout session later in the day, he will cover the very basics of what causes drift, how to mitigate it and how to minimize liability from drift in pesticide applications as well as new technologies that are available on the market including nozzles, pulse width modulation systems and other technologies which can either reduce drift and/or maximize the efficacy of pesticide applications. More specifically, this first session will cover the importance of wind speed and direction, boom height, buffer zones, and droplet size. 0.5 PM CCA CEU; 1 Credit PA Pesticide Core</p>
11:30 am – 12:30 pm	<p align="center">Group Lunch <i>(Included in Registration)</i> <i>(President's Hall 1&2)</i></p>
12:30 pm	<p align="center">General Session <i>(President's Hall 3&4)</i></p> <p>Facilitating 4Rs with Fluids <i>Spencer McCown, Tessengerlo Kerley Inc.- Crop Vitality</i> This presentation will emphasize ways that fluids can enable more optimal 4R implementations to achieve the three Ps (profit, planet, and people). Key examples will be used to help audience understand effective uses of fluid fertilizers and the benefits of implementing the 4R strategies into a fertility management plan. 1.0 NM CCA CEU</p>

<p>1:30 pm</p>	<p align="center">Visit Exhibits <i>(Outside President's Hall)</i></p>	
<p>2 – 2:50 pm</p>	<p align="center">Breakout Sessions – Group One</p>	
<p><u>Breakout A – Room 206</u> Low Salt Fluid Fertilizer Formulations and Usage <i>Ken Sands, Four Seasons Crop Care, Inc.</i> In this session, Ken will be joined by Dervin Druist and Mark Shelly of PowerAg to discuss using low salt fertilizer formulations for starters and foliar applications in crops. Perspectives on where it fits and where it doesn't will be included. 1.0 NM CCA CEU</p>	<p><u>Breakout B – Room 207</u> Application Technology and the 21st Century <i>Greg Kruger, University of Nebraska-Lincoln</i> This session will expand on the basic principle covered in this morning's general session including how to modify droplet size as well as what the label requirements for the new herbicide-tolerant trait technologies mean in terms of applications. 0.5 PM CCA CEU; 1 Credit PA Pesticide Core</p>	<p><u>Breakout C – Room 208</u> Crediting N Supply from Cover Crops and Soil Organic Matter <i>Charlie White, Penn State University</i> Cover crops can recycle nitrogen (N) in the soil and fix N from the atmosphere, potentially offsetting N fertilizer requirements of the next crop. Similarly, the decomposition of soil organic matter can supply N to crops. But do you know how to account for this potentially variable source of N fertility? This presentation will describe the biological processes that make N available from decomposing organic matter and introduce a set of equations that are being calibrated in Pennsylvania to predict the amount of N supplied to corn from cover crops and soil organic matter. 1.0 SW CCA CEU; 1 PA NM; 1 NM PDA/SCC Specified CEC</p>
<p>3 – 3:50 pm</p>	<p align="center">Breakout Sessions – Group Two</p>	
<p><u>Breakout A – Room 206</u> Soil Acidity and Liming Materials <i>Dr. Doug Beegle, Penn State University</i> We all know that having an optimum pH impacts many aspects of crop production, from root growth to nutrient availability, to pesticide activity. However, pH is still low on a majority of soil test reports. Understanding the behavior of soil acidity and how to manage this with different liming materials is critical to crop production success. 1.0 NM CCA CEU; 1 PA NM CEC</p>	<p><u>Breakout B – Room 207</u> Variable Rate Seeding Challenges for Producers and Agronomists <i>Dr. Greg Roth, Penn State University</i> In this session we will discuss some of the challenges associated with variable rate seeding and discuss some of the research that has been done in this area. We will discuss the need for management zones, accurate hybrid response data and conditions where variable rate seeding is most likely to pay off. 1.0 CM CCA CEU</p>	<p><u>Breakout C – Room 208</u> Do You Really Need a Soil Health Test? <i>Dr. Kristy Borrelli, Penn State Extension</i> Building soil organic matter and establishing healthy soils is paramount for having healthy farms and crops. Many laboratories offer soil tests that quantify different aspects of soil health with the goal of helping guide management decisions. But, what do you really need to know from a soil test? This talk will outline various soil health testing methods compared across laboratories and explain their importance. Comparisons of these tests collected from on-farm trials will provide a better understanding of their interpretations and allow you to determine which tests are most appropriate for your specific on-farm management needs. 1.0 SW CCA CEU; 1 PA NM CEC</p>

thursday, january 19 (cont.)

4 – 5 pm	<p style="text-align: center;">General Session (President's Hall 3&4)</p> <p>The History of Ammonia: Staying A Step Ahead of Population Growth <i>Dr. Harry Vroomen, TFI</i></p> <p>The presentation traces the history of anhydrous ammonia from its origin to modern day and calls attention to its crucial role in feeding a growing global population.</p> <p>1.0 NM CCA CEU</p>
5 – 6:30 pm	<p style="text-align: center;">Hospitality Hour (Senate Lounge)</p> <p>Enjoy a relaxing time visiting with friends and colleagues.</p>
7 pm	<p style="text-align: center;">Student/Industry Workshop (ASI Building)</p>

agenda - friday, january 20, 2017

7:30 – 9 am	<p style="text-align: center;">General Session (President's Hall 1&2)</p> <p style="text-align: center;">Moderator – Nicole Carutis, PAES President</p> <p>What's Ahead for Grain Prices? <i>John Berry, Penn State Extension</i></p> <p>John firmly believes no one can predict the future with certainty. However, we will use this session examining how the balance of global grains supply and demand is impacting our farm communities. We will be exploring where we are today, and where we will be in the coming year. This session will assist your being prepared as you discuss grain markets with colleagues, friends, neighbors, and customers.</p> <p>0.5 CM CCA CEU</p> <p>Fertilizer Markets – What's Ahead! <i>Glen Buckley, NPK Fertilizer Advisory Service</i></p> <p>This presentation will provide a general overview of current nitrogen, phosphate and potash markets. It will also provide a discussion of the key factors likely to drive the fertilizer markets both short-term and long-term as well as our outlook for supply availability and prices.</p> <p>1.0 NM CCA CEU</p>
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Thank You to these Conference Sponsors

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For information about sponsorship opportunities contact Amy Bradford at abradford@pennag.com

9:30 – 10:20 am	Breakout Sessions – Group One	
<p>Breakout A – Room 206 A Deeper Look at World Fertilizer Markets <i>Glen Buckley, NPK Fertilizer Advisory Service</i> This round table-style session will allow for a more in-depth discussion of world fertilizer markets and how they impact the Pennsylvania crop farmer. Audience participation will be required so be prepared with questions and to be a part of the conversation. 1.0 NM CCA CEU</p>	<p>Breakout B – Room 207 Back from the Future: Today’s Planter and Drill Technology <i>Tim Norris, Ag Info Tech</i> Tim will step back from the future and follow-up his general session yesterday with a discussion about current technologies for planters and drills, including the importance of calibration and proper technology set-up on equipment. 1.0 CM CCA CEU</p>	<p>Breakout C – Room 208 Herbicides and Interseeding <i>Bill Curran, Penn State University</i> This session will provide an overview of research of herbicide programs that can be used in the Interseeder production system. This should allow participants to have a better understanding of what herbicide programs to use when dealing with the various cover crops that are being grown in this system. 1.0 PM CCA CEU; 1 Credit PA Pesticide Categories PC, 01 & 18</p>

10:35 – 11:25 am	Breakout Sessions – Group Two	
<p>Breakout A – Room 206 Alternative Crops for Pennsylvania Producers <i>Dr. Greg Roth, Penn State University</i> In this session we will discuss some alternative crop options for producers, their market potential and some management guidelines and resources. We will also discuss some strategies for the development of alternative crop markets in our state. 1.0 CM CCA CEU</p>	<p>Breakout B – Room 207 Your 4R Phosphorus Choices <i>Tom Bruulsema, International Plant Nutrition Institute (IPNI)</i> Which 4R phosphorus practice gives you the best opportunity to make money and improve water quality? Is it source, rate, time or place? Or a combination that changes all four? In this session we'll look at efficacy of practices in reducing P loss, and discuss (yes, audience participation expected) what you think their implementation might do to your bottom line. 1.0 SW CCA CEU; 1 PA NM CEC</p>	<p>Breakout C – Room 208 PA DEP Ag Compliance Update <i>Steve Taglang, PA Department of Environmental Protection</i> Since the previous century, Pennsylvania has had environmental regulatory requirements for agricultural operations. Compliance with these requirements was not a high priority for agricultural operations or state agencies. State agencies now have an increased interest in compliance with these requirements, given the significant interest in the water quality of the Chesapeake Bay by federal agencies and environmental groups. This presentation will provide a brief description of these existing regulatory requirements, the on-going efforts to ensure compliance with these regulatory requirements and the potential for additional requirements in the future. Particular emphasis will be given to providing an update on Chesapeake Bay related information, including a status report on the compliance inspections being conducted by DEP and Conservation District staff. 1.0 NM CCA CEU; 1 PA NM CEC</p>

<p>11:45 am – 12:45 pm</p>	<p style="text-align: center;">General Session <i>(President's Hall 3&4)</i></p> <p style="text-align: center;">Moderator – Jennifer McGrail Moyer, PAES President-Elect</p> <p>Managing Phosphorus 4R Crops and Water <i>Tom Bruulsema, International Plant Nutrition Institute (IPNI)</i></p> <p>The last few years have witnessed increasingly widespread worldwide attention to phosphorus losses from agriculture. Producers are now expected to manage phosphorus for improved water quality. The 4Rs of nutrient stewardship apply well to addressing this expectation, but questions are arising about the efficacy of several of its key tools, including soil tests, tillage practices, timing, placement, and cover crops. This presentation will outline what's known and unknown about practices you could be applying in the field.</p> <p>1.0 SW CCA CEU; 1 PA NM CEC</p>
<p>12:50 - 2 pm</p>	<p style="text-align: center;">Lunch & Annual PAES Business Meeting <i>(Included in Registration)</i> <i>(President's Hall 1&2)</i></p> <p style="text-align: center;">Emcee: Nicole Carutis, PAES President</p> <p>The Evolution of Extension and It's Partnership with the Agronomic Industry – My Perspective after 22 Months of Retirement <i>Paul Craig, Penn State Extension – Retired</i></p> <p>After 35 years of service to Penn State Extension, Paul Craig retired in March 2015. He will return to the PA Agronomic Education Conference to give his thoughts on how Extension evolved throughout his career and how it continues to evolve and engage with the agronomic industry.</p> <p>2017 Society Annual Business Meeting and Member of the Year Award Presentation Including election of the 2017 PAES Board</p> <p>Closing Comments/Adjourn <i>Jennifer McGrail Moyer, PAES President – Elect</i></p>

Pre-Conference Planning & Notes

Help us grOW the future of Pennsylvania's agronomic industry!

Your **Pennsylvania Agronomic Education Society** has partnered with the Centre Foundation to raise funds to endow the **PA Agronomic Education Society Trustee Scholarship** for Penn State students seeking a degree in the crop and soil sciences. PAES has committed to raise \$50,000 in order to endow a scholarship that will receive matching funds from the PSU Board of Trustees. Our commitment alone has already led to two scholarships being rewarded. To meet our commitment to the PSU Board of Trustees and create the scholarships into perpetuity, we ask for you to join the effort to make this commitment to our agronomic future a reality! Donations are tax deductible, charitable contributions! **Follow these easy steps to donate toward helping our crop of students grow!**



Visit www.centre-foundation.org/funds/336-pennsylvania-agronomic-education-society-fund or scan this QR code with your smartphone.

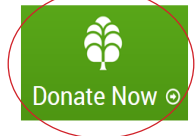


Pennsylvania Agronomic Education Society Fund

Supporting Students in the Crop and Soil Sciences

Story of Fund

This fund was established by the Pennsylvania Agronomic Education Society (PAES) to encourage more students to pursue a degree in the crop and soil sciences. The PAES is more than 200 professionals engaged in the agronomic sciences. Society members share an interest in staying abreast of the



Centre FOUNDATION

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Please use the form below to make an online donation to Centre Foundation.

Make a donation to the Foundation | Make a donation in honor or memory of someone

Donation: \$50.00, \$100.00, \$250.00, \$500.00

Honoree Information: Who would you like to honor? This information will appear on the acknowledgement.

Get In Touch: Name (required), Email (required), Your comment (required)

Click on "Donate Now" button for easy-to-complete online donation form. Contributions may be made as a one-time or monthly payment.

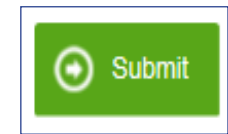


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Your Information: First Name, Last Name

Would you like to apply this donation to a specific fund? Pennsylvania Agronomic Education Soc X



Click Submit to complete online credit card transaction.



Prefer to Donate via Check?

Check donations should be made payable to "Centre Foundation" with "PA Agro Fund" included in the memo. Please mail checks with contact information and any special acknowledgement information (i.e. Anonymous; In Memory/Honor of) to: Centre Foundation, 1377 Ridge Master Drive, State College, PA 16803

Tax Deductible Contribution:

Receipt of your tax deductible contribution will be acknowledged and provided by the Centre Foundation.

Corporate Matching:

Does your employer offer corporate matching? Contact the Centre Foundation at (814) 237-6229 to discuss how you can double your contribution with a corporate match.

For More Information:

Contact Amy Bradford, PAES Secretary at 717-651-5920 or abradford@pennag.com.





Pennsylvania Agronomic Education Conference

January 19-20, 2017

Penn Stater Conference Center - State College, PA

Registration Form

For reduced conference fee register before Midnight on December 31, 2016!

Two Ways to Register:

- Online (with Credit Card)** – Simply log onto <http://www.cvent.com/d/svqrxn> to enter your contact information, registration preferences and credit card information for immediate registration, credit card processing and confirmation/receipt of payment.
- Via Fax/Email/Mail** – Those requesting an invoice or paying by check may complete the information below and return to:

Amy Bradford | PAES

2215 Forest Hills Drive, Suite 39 | Harrisburg PA 17112

P: 717-651-5920 | F: 717-651-5926 | E: abradford@pennag.com

CONTACT INFORMATION

Information will be used for PAES membership purposes.

Name:			I am a CCA: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Company/Affiliation:					
Address:					
City:		State:	Zip Code:		E-mail:
Phone:			Cell:		Fax:
I prefer to receive information via: <input type="checkbox"/> Mail <input type="checkbox"/> Fax <input type="checkbox"/> Email					
I would be interested in serving on the: <input type="checkbox"/> PAES Board <input type="checkbox"/> Conference Planning Committee					

REGISTRATION

Fee includes all conference materials, meals (Thursday breakfast, Thursday reception, lunch both days, breaks both days) and one year Society membership dues (\$25 value) for one person.

Full Conference Registration	<input type="checkbox"/> Before December 31	<input type="checkbox"/> After December 31 or Walk-In	Total: \$ _____
	\$220	\$240	
One Day Registration	<input type="checkbox"/> \$150		Total: \$ _____
	I Will Attend: <input type="checkbox"/> Thursday, Jan. 19 <input type="checkbox"/> Friday, Jan. 20		
Extra Lunch Tickets	Thursday, Jan. 19 - # _____ x \$25	Friday, Jan. 20 - # _____ x \$25	Total: \$ _____

Please List Any Special Dietary Needs: _____

SCHOLARSHIP ENDOWMENT DONATION

Help us endow a fund at Penn State to award multiple annual scholarships to students seeking a degree in the crop and soil sciences.

Please note: Donations made in conjunction conference registration are not tax deductible, however you will be credited for your contribution. To make a tax deductible contribution, please visit www.centre-foundation.org/funds/336-pennsylvania-agronomic-education-society-fund.

\$25 \$50 \$75 \$100 Other _____

Total: \$ _____

ANNUAL PAES MEMBERSHIP ONLY

For those interested in PAES membership but **unable to attend** conference. \$25

Total: \$ _____

Grand Total Due

\$ _____

PAYMENT OPTIONS

Check Enclosed (Payable to **PAES**)

Please Invoice Me