

Greetings

Hello from the CSES Department and Happy Holidays! As of December 1 (2017), I became Interim Department Head as Dr. Erik Ervin has accepted a new position as the Chair of the Department of Plant & Soil Sciences at the University of Delaware. Dr. Ervin will assume his new responsibilities on January 1, 2018, and we want to thank him for his great service as our Interim Head for the past year and wish him the best in his new position. This is a very busy time for us in Blacksburg as the current fall semester is winding down and we approach final exams and winter graduation ceremonies. We expect to graduate eleven students in our undergraduate CSS and ENSC programs this fall along with six graduate students. Congratulations to all of these students and their advisors!



Dr. Lee Daniels

As described in previous newsletters, we are now two years into the “formation process” for the new School of Plant & Environmental Sciences (SPES) which will eventually result in the merger of our department with Horticulture and Plant Pathology, Physiology and Weed Science. As of this writing, we are in the final stages of interviewing potential candidates for the founding Director of SPES and we hope to have that critical leadership position filled soon! The new school will provide us all a great opportunity to develop a unified undergraduate curriculum in Plant Sciences while we continue to improve our highly impactful Environmental Science programs. For the next few years, we anticipate very limited changes to our graduate programs, but over the longer term, I’m sure that new school-wide graduate programs will be developed as well. The faculty and staff of all three departments have been highly collaborative in this merger process over the past several years and I can assure you that all of us are “ready to get on with it”!

In closing, I want to wish all of our current and former students, staff and faculty the very best for the holiday season and we will get back to you with another update in 2018!

CSES Around the World

Deans Semester for Global Challenges in Food, Energy, and Water

During the Fall semester, Dr. Matt Eick was one of eight faculty teaching at Virginia Tech’s Steger Center in Riva San Vitale Switzerland. The program was entitled “Deans Semester for Global Challenges in Food, Energy, and Water”. Food, energy, and water issues, all of which are inextricably linked to climate change, are poised to create new challenges for businesses and governance. This study abroad program brought together experts from various scientific, technical, social and humanitarian disciplines to provide an experiential learning environment to examine causes, impacts, and solutions to these global challenges and opportunities. Students lived at the Steger Center, traveled to Croatia and Senegal and examined solutions to the global food, energy, and water crisis in experiential, research, and team based approaches.



Awards

American Society of Agronomy Presidential Award

The ASA Presidential Award is given to an individual or team who has influenced agronomic sciences or crop production practices so greatly that the impact of their efforts on food security science will be enduring. This year it was presented to all Women Farmers, represented today by Dr. Ozzie Abaye, a professor at Virginia Tech University, and Fatou Gueye and Bineta Guisse, from USAID in Senegal.



CSES undergraduate student, Abbi Han, wins Syngenta National Scholarship



CSES PhD student, Hanh Le, received the 2017-2018 ICTAS Doctoral Scholar Experiential Learning Proposal titled “Examining Some Key Freshwater Quality Indicators using Stroubles Creek as an Example.”

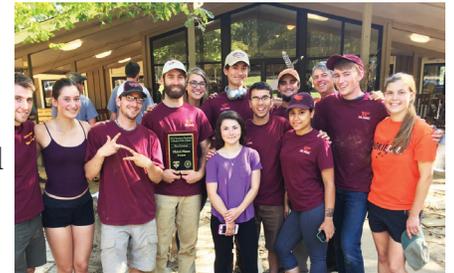


CSES MS student, Caroline Lancaster, received a travel grant from the University of Nebraska-Lincoln where she interned this past summer to present her research at the Tri-Societies Conference. Her poster was titled, “Non- Irrigated Corn Growth and Development Following Cover Crops.”

Virginia Tech Soil Judging Team Takes Third Place, Qualifies for National Championship

The Virginia Tech soil judging team has once again qualified for the national championship contest by finishing 3rd at the Southeast Region contest on October 12, 2017 near LaGrange, TN. The contest was hosted by University Tennessee at Martin. There were 11 teams competing for the top five spots. The champions were University Tennessee at Knoxville, followed by Clemson, Virginia Tech, West Virginia, and Tennessee Tech.

The high scorer for Virginia Tech was 11th place Chris Moritz, a senior Environmental Science (ENSC) major from Gloucester, VA. Other team members were Isabella Fish, junior from Haymarket, VA majoring in CSES-Genetics and breeding; Megan Leach, a junior from Falls Church, VA majoring in Environmental Science; Jirius Abdallah a senior ENSC major from Vienna, VA; Sabrina Vladu, a junior ENSC major from Yorktown, VA; Samuel Withers, a senior in Biological Systems Engineering (BSE) from Asheville, NC; Cameron Bermand, a senior in Environmental Science from Bedford, New Hampshire majoring in Environmental Science; Ben Smith, a junior majoring in BSE from Chesterfield, VA; Xuanyu “Peter” Guo a freshman ENSC major from Beijing, China; and Morgan Ré, a sophomore from Winchester, VA majoring in BSE and Professional and Technical Writing.



The national championship will be held in March, 2018 near Memphis, TN. According to coach John Galbraith, “the contest was very challenging due to the unusual properties of the contest pits. Only one of the four pits had been shown in the practice pits. Our students had not seen soils like the ones in the contest before.” The 3rd place finish qualifies Virginia Tech for the national contest for the 20th consecutive year.

Visit our Facebook page at: [Crop and Soil Environmental Science at Virginia Tech](#)

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CSES Spotlight



Brooks Saville

I started a career as an automotive repair technician at Longshop Service Center for 10 years and in 1998 I had the opportunity to work at Kentland for the College Farm as an Agricultural Technician under Jon Wooge. In 2005 I then had another opportunity to advance to the Crop Production Farm Manager for the College Farm. I am now back at Kentland as the Kentland Farm Manager, excited to be involved in various research projects. I feel it is a good fit for me because of my mechanical background and knowledge being a third generation family farmer with a cow, calf, and small crop production farm.

I have had opportunities to work with Precision Ag and GPS guided equipment in the crop production operation. In my new role I hope to continue and help bring this modern technology to some of our research projects at Kentland. I am a lifelong resident of Montgomery County and live on our family farm with my wife Rachel, daughter Bailey and son Trey. I hope my contributions to CSES/SPES help promote and advance research as well as keeping Kentland a good neighbor to the community and a good steward of our state resources. I look forward to working with everyone at Kentland.

CSES Graduates

Crop and Soil Sciences

Hunter Davis

Elizabeth Gray

Matthew Herrmann

Jamie Hodnett

Environmental Science

Nathaniel Crowther

Jonathan Grubb

Eric Kloepfer

Callam Loughran

Kallie Peurifoy

Matthew Reynolds

Jonathan Taninecz

Graduate Students

Shamima Akter

Jasper Alpuerto

Neal Carpenter

Diana Escamilla

Emma Flemmig

Jinshi Jian

Publications

Battaglia, M.L., C. Lee, and **W. Thomason**. 2018. Corn Yield Components and Yield Responses to Defoliation at Different Row Widths. *Agron. J.* 110: 1-16. doi:10.2134/agronj2017.06.0322

Radolinski, J., J. Wu, K. Xia, and R. D. Stewart. 2017. Transport of a neonicotinoid pesticide, thiamethoxam, from artificial seed coatings. *Science of the Total Environment*.

Stewart, R. D., J. G. Lee, R. A. Darner and W. D. Shuster. 2017. Modeling hydrological response to a fully-monitored urban bioretention cell. *Hydrological Processes*. doi: 10.1002/hyp.11386.

Zhang, X., C. Shang, Y. Liu, G. Hu, K. Harich, and **E.H. Ervin**. 2017. Hormone and dehydrin expression responses to cold acclimation in two zoysiagrass cultivars with contrasting freezing tolerance. *Intl. Turfgrass Soc. Res. J.* 13:547-555. Doi: 10.2134/itsrj2016.05.0428.

Mertz, I., N. Christians, **E.H. Ervin**, and **X. Zhang**. 2017. Physiological responses of creeping bentgrass (*Agrostis stolonifera* L.) to a tryptophan-containing organic byproduct. *Intl. Turfgrass Soc. Res. J.* 13:575-583. Doi:10.2134/itsrj2016.03.0202.

Grants

McLaughlin, D. L., **R. D. Stewart**, K. J. McGuire, and B. D., Strahm. Integrated environmental quality sensing system, Phase II. DOE-SBIR/STTR. 2017-2019. 150,000.

Events

Eastern Shore Agricultural Conference & Trade Show; January 24 and 25, 2018; Melfa, VA; For more information or if you would like to sponsor or utilize vendor space contact: Dr. Mark Reiter, Eastern Shore Agricultural Research and Extension Center, Painter, VA at mreiter@vt.edu or 757.807.6576.

SAVE THE DATE!

Thursday, February 22nd at the Inn at VT

Roy E. Blaser Distinguished Lecture – Assembly Hall - 4:30pm

Blaser and Translational Plant Sciences combined reception following the lecture – Solitude Room – 5:30pm

Friday, February 23rd at the Graduate Life Center Multipurpose Room

School of Plant and Environmental Sciences (CSES, HORT, PPWS) Graduate Research Symposium - 10am-noon

CSES, HORT, and PPWS will be highlighting the outstanding research being done by our graduate students. We will also be inviting our top prospective graduate applicants to attend and spend the day with us.

New faces in CSES

Amanda Bennett – Operations Assistant in CSES main office



Ricky Hughes – Equipment Repair Technician – Kentland Farm



Brooks Saville – Kentland Farm Research Manager



Extension Highlights

On behalf of the national Sports Turf Managers Association, VT Extension Turfgrass Specialist Mike Goatley was invited to lead the turfgrass management portion of the 2017 Major League Baseball Dominican Republic Field Managers Clinic in Santo Domingo. Approximately 80 Field Managers representing all MLB teams from across the Dominican Republic participated in the September program.



A team organized by Gabriel Pent, former PhD student and current Ruminant Systems Specialist, conducted this controlled burn at a farm in Charlotte County in September. The farmer had originally thinned his pine forest to open some corridors for forage establishment for his cattle, but he was unsure how to establish forages under the remaining trees. This project is used to compare different ground preparation treatments, such as burning the pine needles or feeding hay under the trees, as well as different types of nutrient sources to improve soil fertility. The idea for this project came from feedback received at an extension-organized field day at this silvopasture site, and we're looking forward to reporting the results at the next field day.

Tri-Societies Awards

Soil Biology and Biochemistry Division: **Jose Da Cunha Leme Filho**, a CSES PhD student (advisor: Dr. Thomason) won 3rd place in the student poster competition for his poster on “An Integrated Plant Nutrition System (IPNS) for Corn-Soybean Rotations in the Mid-Atlantic USA.”

SSSA Soil and Environmental Quality Division: **Hanh Le**, a CSES PhD student (advisor: Dr. Xia) won 2nd place for best oral presentation for her presentation on “Environmental fate of pirimycin in manure subsurface injected soil – effects of fall and spring applications”.

Wetland Soils Division: **Emily Ott**, a CSES PhD student (advisor: Dr. Galbraith) won 2nd place in the student oral presentation for her presentation on “Effects of Compost Amendments on Soil Properties 14 Years after Application in a Virginia Coastal Plain Created Wetland.”

Soil Fertility Poster Competition: **Clara Ervin**, a CSES MS student (advisor: Dr. Reiter) and Sam Park, an undergraduate student that interned with Dr. Reiter through the REELS program won 2nd place in the student poster competition for their poster on “Poultry Litter Ash as a Phosphorous Source for Corn.”

Soil Physics and Hydrology Student Competition: **Jingjing Chen**, a CSES PhD student (advisor: Dr. Stewart) placed 3rd (out of 22) in the SSSA Soil Physics and Hydrology student competition for her rapid talk and poster on “Incidence, persistence and effects of soil hydrophobicity caused by wildfires in humid hardwood forests.”

Tri-Societies Graduate Student Leadership Conference CSES students, Abigail Baxter, Clara Ervin, and Bethany Wolters were selected to attend the Graduate Student Leadership Conference while at the Tri-Societies meeting.