

Greetings

"It is better to take many small steps in the right direction than to make a great leap only to stumble backward." Chinese proverb.

Change is the theme of my first greeting as interim department head; a change in my day to day duties; some changes in our country coming from our president-elect; and small steps toward a large change in terms of the merging of CSES, HORT, and PPWS in a School of Plant and Environmental Sciences (SPES).

In my un-changed role as CALS Assistant Dean of Academic Programs I have represented the resolution to create SPES as it has moved its way through university governance this fall. The resolution was passed at University Council (chaired by President Sands) on December 5. The last step towards final approval will happen at the March meeting of the Board of Visitors. As the spring semester progresses, we should see the announcement of a job search for the first Director of SPES. Many thanks to those who have served, and continue to serve, on SPES organizational working groups. There are potential exciting small and large changes under a new Plant Science bachelor's degree, a combination of our existing CSES and HORT degrees, with revised majors in Agronomy, Landscape Horticulture, and Environmental Horticulture, and possible new majors in Plant Science (to include Genetics & Breeding), and Sustainable Food Systems. Our undergraduate efforts in International Agriculture will continue with the development of

a CALS-supported Pathways Minor in Global Food Security and Health. Dr. Ozzie Abaye is currently teaching the first run of the introductory class for this minor, with a number of interested students embarking on study abroad trips this spring and summer to Ecuador and China. Our new Associate Dean for International Programs, Dr. Tom Thompson, will be leading the capstone class for this minor.



Erik Ervin

Two final changes center on our graduate students. First, CSES faculty and CALS Administration have approved a budget for major renovation of a 2nd floor graduate study space. This "Starbucks"-like space will provide a comfortable and modern study and interaction area for our hard-working graduate students. Renovations should start and finish over the winter break. Graduate student office space on the 3rd floor will be transitioned to a research faculty office, while the larger office space in the 4th floor will be slightly modernized and retained for the graduate students. All of these spaces will look great by February 3rd when CSES and PPWS host prospective graduate students for the Blaser Lecture and Graduate Research Symposium. I hope to see many of you there. Happy New Year!

Erik Ervin

New faces in CSES



French Price – Farm to Table Coordinator, Virginia Cooperative Extension (Eric Bendfeldt)



Megan Dunford – Community Viability Project Coordinator, Virginia Cooperative Extension (Eric Bendfeldt).

VT Crops Judging Team Goes to Australia – by Dr. Ozzie Abaye

In October 2016, three Wisconsin-Platteville students joined with six students from Virginia Tech led by Dr. Ozzie Abaye and Patricia Donovan. We arrived in Australia four days prior to the contests in Temora. We travelled from Melbourne north through Victoria and southern NSW to Temora for four days of study and tours prior to the contest. Stops included several farms with mixed cropping and livestock production systems, an irrigated rice farm, a dairy, a cattle feedlot, the Coleambally Irrigation Cooperative, the Yanco Agricultural Institute focused on sustainable production of rice and horticultural crops, a vineyard and winery, a grain terminal, and a paddle steamer cruise on the Murray River. After the competition, our trip concluded with a stop at Healesville Sanctuary to see Australian native animals and sightseeing in Melbourne.



2016 Annual Soybean Breeders' Tour

On September 7th-9th, the Virginia Tech Soybean Breeding Group, led by Dr. Bo Zhang, welcomed 85 attendees representing 8 land-grant universities, 3 USDA-ARS stations, 5 growers associations, and 3 agricultural companies from across the South and Midwest to Richmond for the 2016 Annual Soybean Breeders' Tour. The tour gives soybean researchers an opportunity to come together to see the field research of a different program each year and discuss the latest happenings within the field of soybean research to promote collaboration and the free exchange of ideas.

-Dr. Bo Zhang



Congrats to the 2016 Fall Graduates!

Graduate Students

Julia Cushman

Christopher Fields-Johnson

Gordon Jones

Chao Qin

Theresa Sosienksi

Crop and Soil Sciences

Hunter Blake

Katelyn Cox – cum laude

Andy Kinch

Drew Miller

Matthew Roberts

Environmental Science

Gregory Duffy

Brian Gramp

Charlotte Harrell

Christopher Joyce

Megan Repass

Regan Wagner – magna cum laude and honors

Weida Wu

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

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Faculty Spotlight



Dr. Wade Thomason

I came to the CSES department in 2004 after a two-year stint with the Noble Foundation in Ardmore, OK and graduate work at Oklahoma State University. Over the years many people have asked what brought us to Virginia and I always answer that Virginia Tech was looking for a row-crop extension agronomist and that I wanted to be one.

I serve as the grain crops extension specialist for Virginia. In this role I provide state-wide leadership for extension and research programs in production and management of corn and small grains and oversee the hybrid and variety evaluation efforts. My applied research interests are in cropping systems and precision agriculture, especially remote sensing technologies. Small grain and corn production in Virginia regularly represents over \$150 million in grain sales annually. And farmers of these crops are managing over 700,000 acres of the Virginia landscape.

When my oldest daughter was in the third grade she was asked the question: What does your father do at Virginia Tech? Her answer? He drives around and talks to farmers. While it's sometimes more complicated than that, it's actually a pretty good description of my job. I believe that Extension is still very much a face-to-face business. We have to know our clientele and coworkers well enough to understand their issues and concerns so that we can help provide appropriate suggestions and solutions. We need to demonstrate those solutions at the local level in order to help farmers experience them first hand. And we need to be there with site-specific ideas and assistance in order to improve productivity and efficiency.

Publications

Liu, Yiming, Jianmin Miao, Sy Traore, Danyu Kong, Yi Liu, **Xunzhong Zhang**, Zachary L. Nimchuk, Zongrang Liu, and Bingyu Zhao. 2016. SacB-SacR gene cassette as the negative selection marker to suppress agrobacterium overgrowth in agrobacterium-mediated plant transformation. *Frontier in Molecular Biosciences*. 26 Oct. <http://dx.doi.org/10.3389/fmolb.2016.00070>.

Maguire, R.O., and T.Sexton. 2016. Moving Virginia AFOs to Sustainable Phosphorus Mass Balance to Prevent Buildup of Soil Test Phosphorus and Reduce Phosphorus Inputs to the Bay. \$367,207. Funded by the National Fish and Wildlife Foundation.

Stewart, R.D., M. R. Abou Najm, D. E. Rupp, and J. S. Selker. 2016. Modeling multi-domain hydraulic properties of shrink-swell soils. *Water Resources Research*. doi: 10.1002/2016WR019336.

Stewart, R. D., D. Moreno, C. T. Gregory and J. S. Selker. 2016. Evaluation of infiltration discharge as a strategy to meet effluent temperature limits. *Journal of Sustainable Water in the Built Environment*. doi: 10.1061/JSWBAY.0000818.

Events

Save the date!

The Blaser Lecture and Graduate Research Symposium will be on Friday, February 3rd from 3pm-6pm at the Inn at Virginia Tech. CSES and PPWS will be highlighting the outstanding research being done by our graduate students and there will be a keynote speaker that is part of the Blaser Distinguished Lecture. We will also be inviting our top prospective graduate applicants to attend and spend the day with us.

Quantifying Soil Health Project

Healthy soils are needed to produce maximum crop yields while limiting environmental impacts due to erosion and excess nutrients ending up in waterways. As part of a USDA National Resources Conservation Service (NRCS) Conservation Innovation Grant, a team of researchers from CSES (Dr. Ryan Stewart, Dr. Wade Thomason, Dr. Mark Reiter, Dr. David Reed, Ayush Gyawali) and Biology (Dr. Michael Strickland) have been working to "Quantify Soil Health". As part of this effort, team members have held a number of demonstration days and activities throughout the state of Virginia, including events held at the Eastern Shore AREC (Painter, VA), the Southern Piedmont AREC (Blackstone, VA), Ferrum college (Ferrum, VA), and test plots near Harrisonburg, VA (as part of a Smith Creek Partnership meeting. These events have been a great opportunity to work with farmers, NRCS and DEQ personnel, and other interested parties to demonstrate how management practices such as reduced tillage and using cover crops can improve the health of our farmland soils.

-Dr. Ryan Stewart



Tri-Society Fellows Awards:



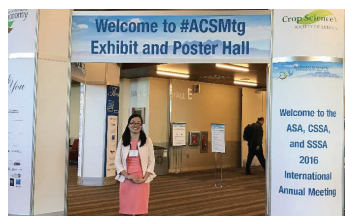
Dr. Erik Ervin - Fellows of the American Society of Agronomy



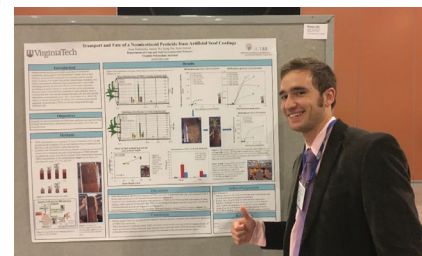
Dr. Lee Daniels – Fellows of the Soil Science Society of America

Tri-Society: Soils and Environmental Quality Division:

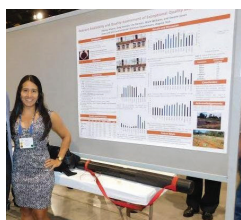
Hanh Le, a CSES PhD student (advisor: Dr. Xia) won 2nd place in the Student Oral Presentation for her presentation on “Effects of Manure Land Application Technologies and Timing on Environmental Fate of Four Antibiotics Commonly Used in Dairy Production”.



Jesse Radolinski, a CSES MS student (advisor: Dr. Stewart) won 2nd place in the Student Poster Presentation for his poster on “Transport and Fate of a Neonicotinoid Pesticide from Artificial Seed Coatings.”



Tri-Society: Urban and Anthropogenic Soils Division:



Odiney Alvarez-Campos, a CSES PhD student (advisor: Dr. Evanylo) won 1st place in the Student Poster Presentation for her poster on “Nutrient Availability and Quality Assessment of Exceptional Quality Biosolids Products”



Dr. Charles Hagedorn Honored with Emeritus Status

VT Soil Judging Team Wins Regionals!



The winning team from Virginia Tech (left to right): Taylor Church, Caitlyn Herron, Weida Wu, coach John Galbraith, Stephanie Duston (3rd), Rob Goodwin (7th), Elizabeth Gray, Samuel Withers (2nd), and Hunter Wyatt (10th).

Dr. Carl Griffey reappointed W.G. Wysor Professor of Agriculture



Dr. Ryan Stewart was selected as the top winner for the Global Education Office 2016 Photo Contest for the faculty/staff category. The photo shown here was taken this past summer during a study abroad to Ecuador that he co-led with Dr. Ozzie Abaye.

