

PLSC Productivity

NEWS FROM THE DEPARTMENT OF
PLANT & SOIL SCIENCES



UNIVERSITY OF DELAWARE
**AGRICULTURE &
NATURAL RESOURCES**

Chair's Corner

Welcome to summer! We have had a strange and trying spring semester with campus being closed due to the pandemic. I want to CELEBRATE our faculty, students, and staff for their quick adaptation to online teaching and learning, their resiliency in the face of these challenges, and their successes! This May and August marks the graduation of the class of 2020, with 17 undergraduates receiving their degrees. I was upset that we were not able to celebrate their achievements in person, but look forward to an official university graduation event, possibly in December.



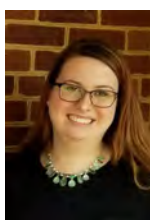
As of this writing the University is making plans for a safe and robust return to campus for fall classes. I say safe because all classes over 50 students will still be online, but robust as many smaller classes (most of ours) will be in-person every other week, with labs and studios meeting in small groups, with physical distancing and face coverings. In PLSC we pride ourselves on experiential learning so we will make every effort to continue hands-on exercises on the Newark Farm, in our greenhouses, and on the grounds of our Botanic Gardens. Our incoming freshmen class is at 15 right now, just as good or better than previous years. These freshmen, along with 5-10 transfer students, will replace all those who recently graduated.

Speaking of welcoming new faces, Dr. William Meng joins us this summer as the leader of our new program in controlled environment horticulture. His new class on hydroponic production is sure to attract numerous budding horticultural entrepreneurs. Please see his faculty spotlight on page 3. Ms. Jill Pollok joined us this spring, replacing Nancy Gregory as the Director of our Plant Diagnostics Clinic (UD Cooperative Extension). Jill received her M.S. degree from Virginia Tech and joins us after working a few years as an applied plant pathologist at VT's Eastern Shore Agricultural Research and Extension Center. Finally, I want to congratulate Ms. Barbra Ferrell on her promotion to Associate Scientist. Barbra is an essential part of Associate Dean Eric Wommack's viral ecology research program.

While the pandemic shut down UDBG's in-person spring plant sale, it did not stop them from selling their unique landscape plants online (for drive-thru pickup)! Due to the long hours put in by Valann Budischak, Melinda Zoehrer, and Andrew Adams, this year's sale has been a big success. Some inventory remains and will be part of a discounted plant sale to the general public on June 26. See <http://canr.udel.edu/udbg/event>

Great news on our efforts to recruit the most outstanding Ph.D. candidates! PLSC faculty were recently awarded four CANR Unique Strength Ph.D. Fellowships: Ms. Fatema Kuniz with Dr. Yan Jin (**Sustainable ecosystems**) / Mr. Stephen Smith with Dr. Erin Sparks (**Sustainable food systems**) / Ms. Grace Jeschke with Dr. Tara Trammell (**Sustainable ecosystems**) / Ms. Elizabeth Smith with Dr. Rodrigo Vargas (**Climate change**)

The UD Graduate College has recently awarded the following students with Doctoral Dissertation Fellowship Awards that render funding support for one year: Ms. Gretchen Dykes with Dr. Angelia Seyfferth / Ms. Amanda Rosier with Dr. Harsh Bais / Ms. Gulcin Tosun with Dr. Deb Jaisi



In this "Triple Crown" of graduate student funding announcements, Ms. Lauren Mosesso, advised by Dr. Amy Shoher, is the recipient of the Donald L. and Joy G. Sparks Graduate Fellowship in Soil Science. This award was established to recognize a continuing PLSC soil science graduate student who extolls excellence in academic performance, research and/or teaching, leadership and interpersonal skills, and promise for an outstanding career. Lauren also received the 2020 Richard A. Herbert Memorial Education Scholarship, awarded by the American Water Resources Association. She was most qualified by academic and research performance, relevance of her curriculum to water resources, and leadership in extracurricular activities related to water resources.

Congratulations to all! We look forward to an active summer of field research, mentoring of undergraduate and graduate students, and preparing our classes for a successful hybrid (some online/some in-person) fall semester.

College Award of Distinction!

We were not able to hold the CANR Convocation on May 30 but some awards were announced prior to the end of the spring semester. One of the CANR's top internal awards was won by a member of PLSC! Teclmariam Weldekidan, better known as Tecele, won the **CANR Excellence in Service Award for Research Support Staff**. Over the past 30 years - he reached that milestone in February 2020 - he has helped secure over \$12 million in competitive funding and has involved hundreds of students in maize breeding.

"Your contributions to academia are a result of not a string of luck but hard work, and those who know you will say that your work ethic is unmatched. This comes at a great time in your career, celebrating your 30th year at the University of Delaware. It has been a privilege to work with you for the last decade." – PLSC's Dr. Randy Wisser, paying tribute to Tecele for winning the CANR research support award.

When did you first come to UD and why?

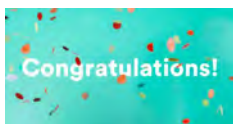
I came to UD in January 1987 for graduate school to study plant pathology. My graduate project was focused on identifying and studying the epidemiology of a new soybean disease (Soybean Severe Stunt Virus) in Delaware. I did my work under the supervision of Dr. Robert Carroll and Dr. Thomas Evans.



What different jobs have you had? How did you progress in your work over all of these years?

My first job after graduating from Alemaya College of Agriculture, Addis Ababa University, Ethiopia was working at the Institute of Agricultural Research in Awassa, Ethiopia from July 1980 to December 1986 as a Research Officer/Plant Pathologist. My work was focused on disease resistance and protection in corn, soybean, and sunflower.

After getting my M.S. degree from UD in 1989, I was hired by UD on February 1990 as a Research Associate II, working with Dr. James Hawk in corn breeding. I moved over the years through different career ladders (Research Associate III, Associate Scientist, and Scientist). My responsibilities include research projects on the development of elite corn inbred lines and disease resistance. From 2009 to the present, I have worked with Dr. Randy Wisser. My responsibility is involved in research projects on the genetics of environmental adaptation, response to artificial selection, multiple disease resistance, and development of germplasm stocks. I am involved in the national trial "Genomes to Fields" initiative to support translation of maize genomic information for the benefit of growers, consumers, and society. I run the annual Delaware commercial hybrid corn performance yield test. Other responsibilities include training activities for our summer plant genetics and breeding internship program for high school and undergraduate students, and supporting graduate students in their research projects. I am involved in the development of breeders' toolbox software "Accrete Genetics & Breeding" that supports the complete workflow for managing genetics and breeding projects from selecting stocks for a given planting to inventorying seed stocks in the database.



Dr. Donald L. Sparks, professor of soil and environmental chemistry in PLSC, and current Unidel S. Hallock du Pont Chair and Director of the Delaware Environmental Institute, recently received the following note of thanks from Kathie Bailey, J.D., director of the Board on International Scientific Organizations [BISO]:

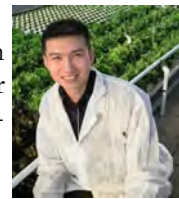
"On behalf of both the National Academies of Sciences, Engineering, and Medicine [NASEM], and the U.S. National Committee for Soil Sciences, I want to thank you for your nine years of service and your many contributions to this institution broadly and to BISO specifically. The advice and guidance you have provided both as a member and a chair of the U.S. National Committee [USNC] has been enormously helpful. Your institutional knowledge, having been president of the Soil Science Society of America and of the International Union of Soil Sciences, has been invaluable; it helped the committee navigate important diplomatic issues and, as head of the U.S. delegation to the general assemblies, resolve matters of governance at the union level. As USNC chair, you guided the committee and assisted with the USNC/Soil Science – SSSA Travel Award Program for the Jeju World Soil Science Congress for U.S. students and early career scientists. In addition, you were a main organizer of the Soils: The Foundation of Life workshop, which already resulted in an important national conference on Soil Health and Human Health and a renewed U.S. interest in soil health and human security... The NASEM plays an important role in promoting international cooperation in science. Our effectiveness in international activities is only possible through the selfless voluntary efforts of people like you. We deeply appreciate your activities and involvement over the years, and look forward to continued work with you in the future."

Faculty Spotlight

*Qingwu (William) Meng—Assistant Professor, Controlled Environment Horticulture
New Professor Profile*

Could you give a little background on yourself?

I grew up in the city of Lanzhou in China. I received a B.E. in Agricultural Engineering and a B.A. in English from Beijing-based China Agricultural University, even working part-time as an English teacher in my senior year. Originally on track to become an engineer, I grew interested in plant science through undergraduate research projects on plant physiology and indoor agriculture.



The intersection between engineering and plant science has since become my career emphasis. I obtained a M.S. in horticulture at Michigan State University (MSU), where I researched photoperiodic lighting to control flowering and extension growth of floriculture crops. I spent a year further learning about lighting engineering and applications in a Ph.D. program at Rensselaer Polytechnic Institute before returning to MSU to complete my Ph.D. in horticulture. At MSU, I helped design, construct, and manage the Controlled Environment Lighting Laboratory, where I researched how light quality influenced commercially relevant phenotypes of hydroponic leafy greens and herbs grown indoors.

What are your plans at UD?

After gaining some industry experience, I am excited to join the UD community to conduct research, teaching, and service. My research will focus on environmentally-enabled improvements of growth and quality traits of specialty food crops grown in controlled environments. In the fall, I will teach the Introduction to Hydroponics course to spark students' interest in indoor agriculture and sustainable urban food systems while imparting practical knowledge on hydroponic crop production.

Undergraduate Student Highlights

Editors note: This article was excerpted from a UDaily article by CANR writer D. LaPenta and photographers M. Moriak and J. Wardrup.

In agriculture and natural resources, a soil's ability to support plant life is critical. Soil judging is the field component of soil science, a diverse discipline that combines geology, chemistry, physics, and biology. The hands-on experience involves description, classification, and interpretation of soil profiles, which tell the story of the arrangement of the soil's layers.

As a PLSC undergraduate, current PLSC graduate student and research assistant Ms. Jocelyn Wardrup wanted the soil judging experience; unfortunately, UD did not have a team. So, she became the driving force behind creating UD's inaugural team. The head coach is Ms. Jenwei Tsai, a scientist with the Delaware Department of Natural Resources and Environmental Control. In its first year of competition, UD undergraduates finished well in the northeast regional collegiate soil judging contest against other universities, earning a spot in April's national competition on the soils in Ohio (which ultimately was canceled due to the pandemic).

The National Soil Judging Contest has been held at a different host institution each year since 1961. Contestants arrive at various soil pits and are expected to correctly identify, evaluate, classify, and describe three soil profiles. The competition provides students in environmental and agricultural disciplines important soil interpretation skill development. Soil scientists evaluate and interpret soils and soil resources through the lens of agricultural production and environmental quality. Soil judging helps take classroom learning and make it real by repeated practice of skills required for a successful career in soil science.



The UD soil judging team studies on its home field, the College of Agriculture and Natural Resources in Newark.



UD's first soil judging team poses at the scenic test pit overlooking the confluence of Shipyard Creek and West Fork Langford Creek at the Remington Farm, location of the 2019 northeast regional soil judging collegiate contest in nearby Chestertown, Maryland. Left to right: Morgan "Duke" Williams, Christopher Swift, Luke Mulcahy, and Katie Mina.

Events and Outreach

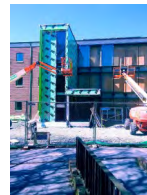


The Food and Agriculture Organization of the United Nations (FAO) declared 2020 as the International Year of Plant Health (IYPH). The year is an opportunity to raise global awareness on how protecting plant health can help end hunger, reduce poverty, protect the environment, and boost economic development. Events were canceled as a result of the pandemic; there is discussion about potentially expanding the IYPH. The following statement issued by the FAO offers insight: “The spread of highly contagious transboundary diseases, such as COVID-19, is intimately linked to plant health. Destruction of natural habitats and ecosystems has left both plant life and human life exposed. Plants are our main source of food and nutrition – keeping us alive and increasing our system immunity – and, in many countries, the principal livelihood source for many smallholder farmers. That is why even during the COVID-19 pandemic, farmers, plant health authorities, extension agents, field officers, and monitoring and forecasting experts are continuing to support plant health and take steps to prevent and control plant pests and diseases such as desert locust, fall armyworm, and red palm weevil. Others are helping to transport and bring to market healthy plant products so that consumers have enough to eat and producers and sellers continue to have an income. At global, regional and national levels, FAO, IPPC, and regional and national plant protection organizations are working closely with Member Countries to ensure that extra measures are taken to protect all of these plant health heroes during the COVID-19 pandemic – the health of our plants depends on them.”

Ready – Set – Grow!



Progress continued on the Worrilow Hall renovation after COVID-19 disrupted usual campus activities. Glass was delivered so the new look of the south side of the building is almost complete.



Earlier this year, the Landscape Architecture major subtly identified its creative spaces.



We encourage alumni to send us news to keep us informed! A new job, a promotion, a personal or professional award... they're all accomplishments we want to know! Email a note or a press release, including your graduation year, to mpautler@udel.edu

We are seeking to showcase alumni stories on a bulletin board in the PLSC corridor of Townsend Hall. We would like to highlight the career paths of our former students to current and prospective students and their families. If you are interested in providing a 250-words or less description of your career path from your PLSC education to your current job, along with a photo showing you at said job, please email mpautler@udel.edu for more details.

Back Porch Business

[Make a gift to the Plant & Soil Sciences Department](https://ud.alumniq.com/giving/to/plantandsoil) (<https://ud.alumniq.com/giving/to/plantandsoil>) to support student success. Gifts to the department provide funding for student travel to research and professional development events as well as stipends for undergraduate summer research and Extension Scholars. You may also give to the College of Agriculture and Natural Resources or another PLSC program by selecting “Other” and searching for the fund you wish to support. Contact Dan Sarkissian, Director of Development, College of Agriculture and Natural Resources at 302-831-4595 or djs@udel.edu with any questions or concerns.

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