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DEPARTMENT OF PLANT AND SOIL SCIENCES

ALUMNI NEWSLETTER

FALL 2020

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The Department of Plant and Soil Sciences is one of 14 academic departments in the College of Agriculture, Food and Environment (CAFE). The department's programs are diverse in both our mission areas – teaching, research, and extension; and in our broad areas of interest – crop science, environmental science, plant molecular biology, and soil science. The department has over 40 faculty members and 60+ staff members as well as post-doctoral scholars, graduate research assistants, and visiting scholars.



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## Welcome

**W**elcome to the first alumni newsletter from the Department of Plant and Soil Sciences at the University of Kentucky. We're happy that we've reached you. Depending on when you graduated, a lot may have changed. If you completed your program a while ago, you may be wondering if this newsletter is for you.

Yes! We want to connect all alumni of our Department with our current faculty and students.

Know someone who would like to hear from us? Feel free to share this newsletter and encourage them to update their contact info. We plan for this to be a bi-annual publication so we won't be bombarding your inbox/mailbox – we have other options for staying connected on a more regular basis when you update your contact information at <https://bit.ly/35Yh9mV>.

## Message from the Department Chair

Greetings Alums!

I am the current Chair of the Department of Plant & Soil Sciences (formerly Agronomy) at the University of Kentucky. I've held this position for a little over two and a half years. I start-

ed my academic career in our Department in April 2006, as an Assistant Professor of Grassland Agroecosystem Ecology. Since my arrival at UK, some things about the Department have changed, while others have stayed the same. We are still a research and extension focused unit - the largest Department, people-wise, in the College, with 42 full-time faculty, ~40 graduate stu-



dents, and ~120 staff. However, we are more diverse than we used to be. Our primary mission remains much like it always has 'to improve the understanding of plant and soil systems as sustainable resources for human use while preserving and enhancing environmental quality.' We continue to work at the research farms here in Lexington (Spindletop & Oran Little), the western KY Princeton station (UKREC and Grain & Forage Center for Excellence), Eden Shale (though no longer managed by UK), and the Robinson Center for Appalachian Resource Sustainability in the east.

What has perhaps changed the most over time is our associated degree programs. We've provided in this newsletter a brief timeline of the creation and longevity of the undergraduate and graduate degree programs that we have been involved with over the years. We hope this assists you in connecting with your place in our history. During my time as Chair, we have withdrawn from the 'Horticulture, Plant & Soil Science' B.S. degree and have created a new 'Agricultural Ecosystem Sciences' B.S. degree. We are very excited about this new degree program, as we believe it is a better representation of what most of us do and will be attractive to students and employers alike. This new program is only in its second year and already has ~20 students enrolled. We are quite optimistic about its future.

Similarly, our graduate degree programs have evolved over time. Currently, we are the most active participating Department in the interdisciplinary 'Integrated Plant & Soil Sciences' M.S. and Ph.D. programs, which also includes Horticulture and Forestry & Natural Resources. IPSS routinely graduates ~8 M.S. and ~8 Ph.D. students a year. We are very proud of the trajectories of our graduating students, as about 50% move into jobs (industry, government, and academia) and 20% move into additional degree programs and postdocs, with the rest undecided at the time they graduate.

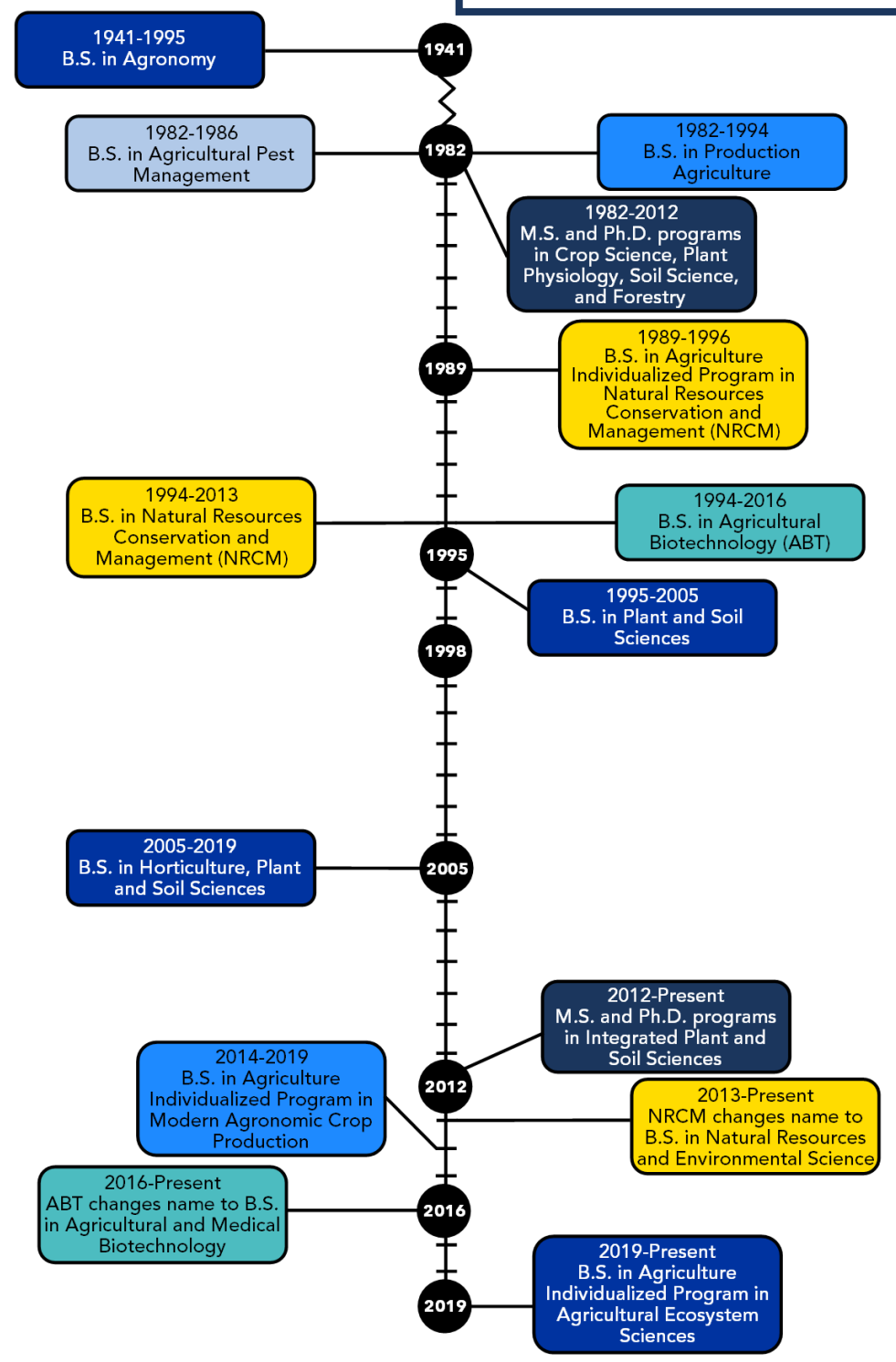
Our graduates (you all!) are doing extraordinary things, and we want to be better connected so that we can acknowledge and appreciate your accomplishments. This newsletter is the first of several efforts we are initiating in order to build relationships between our current student body and those of our past. I hope to meet many of you soonish - once COVID releases its hold on us all. While this year has been a very challenging one, our research, extension, and teaching missions are being fulfilled, and we remain committed to connecting with our alums, electronically and in person, as soon as possible.

Stay safe -

*Rebecca L. McElroy*

# Timeline

The Department of Plant and Soil Sciences (formerly the Department of Agronomy) has contributed to many degree programs over the years. Check out the graphic below to determine where your time with us fell!



# Integrated Plant and Soil Sciences (IPSS)

Formerly offered as distinct programs, the graduate program in Integrated Plant and Soil Sciences serves as an umbrella for students pursuing concentrations (M.S.) or specializations (Ph.D.) in Crop Science, Plant Physiology, Soil Science, Horticultural Science, and Environmental Science and Ecosystem Ecology. All students are required to take core courses in trans-disciplinary communication and research. The IPSS program currently has 54 (36 Ph.D./18 M.S.) students enrolled.

## Year-In-Review



Guided by our Director of Graduate Studies, Dr. Mark Coyne, and a Steering Committee, the graduate program has undergone some changes in the last year.

## Forestry Option

Forestry was removed as a specialization as a result of the Department of Forestry and Natural Resources initiating its own Ph.D. program in 2018. In its place, IPSS has added a new specialization of Environmental Science and Ecosystem Ecology (ESEE). Within the ESEE specialization, students are provided the option to conduct research in aquatic, agronomic, wetland, forest, grassland, or other ecosystem types or biomes. While research in this specialization can be related to production agriculture, it can also include management or conservation of natural ecosystems, environmental and human health, environmental toxicology, basic ecology, biogeochemistry, earth system modeling, or other areas that are not necessarily directly related to agricultural production.



# Integrated Plant and Soil Sciences (IPSS)

## Symposium

Our IPSS Symposium, formerly held bi-annually, moved to a once-per-year format. Made possible by generous donations from Dr. Bill Witt (Emeritus Professor) and Dr. Don Sparks (Alum), the symposium is designed to bring the IPSS community together to celebrate the accomplishments of our students and to foster truly interdisciplinary interactions within our highly diverse graduate program. It is also an opportunity for the students to practice communicating their research and to receive constructive feedback on their presentation.

With the format change, the symposium was held conference-style with oral and poster presentations. To provide plenty of space for networking, the event was held in the beautiful Woodford Reserve Room at Kroger Field.

This year, those placing in the competition were as follows, with primary advisor in parentheses:

Oral Presentations	Poster Presentations
1 <sup>st</sup> – Rebecca McGrail (McNear)	1 <sup>st</sup> – Jason Simmons (Ritchey)
2 <sup>nd</sup> – Kelly Mercier (Teutsch)	2 <sup>nd</sup> – Elzbieta Szuleta (Van Sanford)
3 <sup>rd</sup> – Tim Shull (Smalle)	3 <sup>rd</sup> – Layne Ellen Harris (DeBolt)



# Integrated Plant and Soil Sciences (IPSS)

## Symposium



All IPSS Symposium photos credited to Dr. Jimmy Henning and Joe Omielan.



## IPSS Graduate Student Association (GSA)



The purpose of the Integrated Plant and Soil Sciences Graduate Student Association (IPSS GSA) is to welcome new graduate students into the program as well as sponsor professional and social events. All graduate students in the IPSS graduate program are automatic members in this organization. The IPSS GSA meets once a month during the school year. Learn more at: <https://ipss.ca.uky.edu/graduate-student-association>.

If your organization is interested in hosting the GSA for their annual professional development program, please complete the following form: [https://uky.az1.qualtrics.com/jfe/form/SV\\_8hKg3f7Han8W04J](https://uky.az1.qualtrics.com/jfe/form/SV_8hKg3f7Han8W04J)



The IPSS Graduate Student Association created a LinkedIn page to connect alumni across the graduate programs. The goal of the page is to facilitate communication between like-minded alumni via messages, discussion questions, and networking opportunities.

Join the group by visiting: <https://www.linkedin.com/groups/12375164/>

## Alumni Spotlight



"I had a lot of opportunities for both professional and personal growth while at the University of Kentucky. I have been able to travel and present at conferences, write grants to fund my research, published manuscripts, give multiple extension presentations over my research, meet industry leaders, plan and attending multiple IPSS GSA professional development trips for our graduate students, host seminar speakers, and host departmental events. I would not have these experiences if I did not attend the University of Kentucky and be a part of the Plant and Soil Sciences Department."

-Katherine Rod, Ph.D., 2020 IPSS Graduate,  
Trainee with Bayer Crop Science



## Awards

### Early Career Award

Presented by the IPSS Graduate Student Association, recipients must have completed their doctoral degree in IPSS or the preceding programs within 5-15 years of the award date and be employed in a position related to plant and soil science. The first award was presented in 2019.



(Left to Right) Dr. Jarrod Miller, Katherine Rod, and Rebecca McGrail

#### 2019—Dr. Jarrod Miller

Dr. Jarrod Miller (2019 recipient) completed his doctoral degree in Soil Science in 2008 under the direction of Dr. Anastasios Karathanasis. His dissertation research focused on soils disturbed by strip mining practices. After spending time as a postdoctoral scholar in the Forestry Department at the University of Kentucky, Jarrod became a Research Soil Scientist for the Agricultural Research Service in South Carolina and, later, an Extension Agent for the University of Maryland. In 2017, he was appointed as an Assistant Professor and Extension Specialist in Agronomy at the University of Delaware.

## Awards

### Early Career Award

#### 2020—Dr. Daniela Sarti-Dvorjak

Dr. Daniela Sarti-Dvorjak (2020 recipient) completed her doctoral degree in Crop Science in 2014 under the direction of Dr. David Van Sanford. Her dissertation research focused on Fusarium head blight resistance in soft red winter wheat. Daniela is the North America Soybean South Market Segment Lead at Syngenta.



(Left to Right) Katherine Rod, Dr. Daniela Sarti-Dvorjak, Dan Quinn, Rebecca McGrail, Sam Leuthold, and Alayna Jacobs





## Awards

### Distinguished Alumnus Award

2019—Dr. DongMei Xu



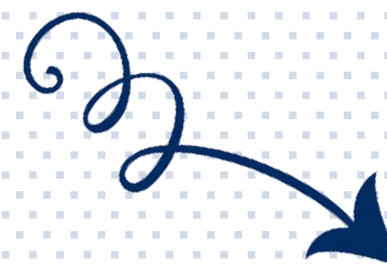
(Left to Right) Dr. Mark Nielsen,  
Dr. Art Hunt, Dr. Todd Pfeiffer,  
Dr. DongMei Xu, Dr. Bob  
Pearce, and Dr. Lowell Bush

Dr. DongMei Xu (2019 recipient) completed her doctoral degree in Crop Science in 1996 under the direction of Drs. Mark Nielsen and Glenn Collins. Her dissertation research focused on genetic engineering strategies for virus resistance in tobacco. DongMei started her career with U.S. Smokeless Tobacco in Winchester, Kentucky. During her time there, she also served as adjunct faculty at UK in the Department of Agronomy. In 2008 or 2009, DongMei accepted a Principal Scientist position with Altria, where she continued to move through the ranks to Senior Principal Scientist and her current position of Fellow. DongMei is a pioneer in developing tobacco lines low in nornicotine production and has countless accomplishments to her name.

## Awards

### Distinguished Alumnus Award

2020—Dr. Jennifer Ralston



Dr. Jennifer Ralston is the 2020 recipient. Jennifer completed both her master's (1996) and doctoral (2001) degrees in Crop Science at UK under the direction of Drs. Bill Witt and Michael Barrett, respectively. Her dissertation research focused on herbicide selectivity for weed management in crops. Jennifer currently serves as a Regional Business Director for Monsanto. While Jennifer's visit to campus to receive the award has been thwarted by COVID-19, we look forward to welcoming her in the near future.



## Awards

### New: Johnston-Carringer Award



A new award fund aimed towards graduate students achieving excellence in agronomy was recently granted to the Department of Plant and Soil Sciences. The Johnston-Carringer Agronomy Graduate Student Award, founded by Rick and Sandra Carringer, will be launched Spring 2021. Both Rick and Sandra are alums of our Department. Rick earned his Ph.D. in Plant Physiology (1977) and Sandra earned her B.S. in Agronomy (1976). They met while working in Dr. Charles Rieck's weed science lab.

"We were both fortunate to have benefited from research assistantships that allowed us to further our education in graduate school that might not have been possible otherwise. The education we received at UK in the classroom, laboratory, and in the field shaped our lives in so many ways, and in large part, has been instrumental in the successes we have achieved in owning and managing an Ag research business. The award fund we have established is simply a way for us to give back to UK to assist current and future graduate students in becoming successful. Hopefully it will provide additional opportunities for them that will further enhance the exceptional education they will receive at UK."

-Sandra Johnston Carringer, Johnston-Carringer Award Co-Founder

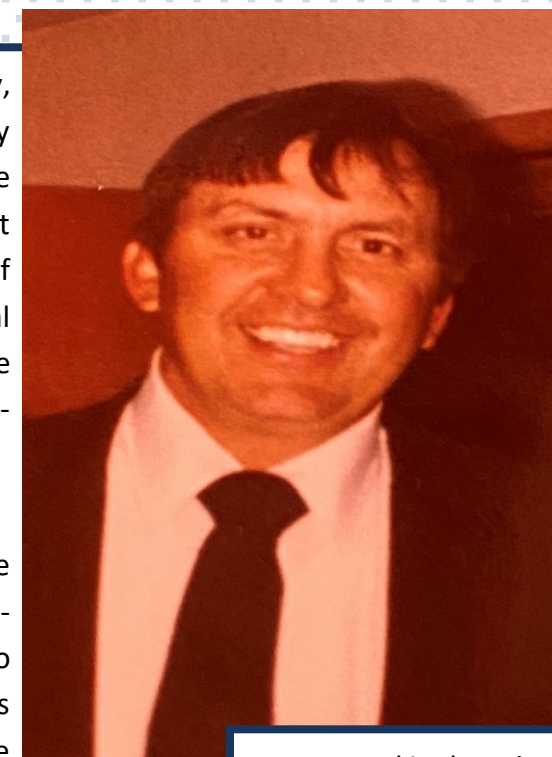
## Awards

### New: Rieck Award

Dr. Richard W. Schumacher (Ph.D. in Plant Physiology, 1974) made a generous donation in honor of his primary advisor, Dr. Charles Rieck, and created the 'Dr. Charlie Rieck Crop Protection Graduate Student Development Fund.' The endowed fund will support the participation of graduate students studying weed science in professional development opportunities. Other graduates/alums are encouraged to donate to the fund. We thank the Carringers for also contributing to this cause.

"Dr. Charlie Rieck taught me, in addition to academics, the importance of teamwork and need to effectively communicate one's ideas. He supported all his students to go & participate in Professional Society meetings as long as we presented a research paper and participated in the grad student competitions. This provided an opportunity to interact with scientists from Universities and Industry, plus students from schools across the country and develop lasting relations with these individuals. I believe these opportunities provided me a strong base for a great career in Monsanto with many opportunities to help improve the life of numerous farmers in Asia. The fund was established to support current students to have some of the opportunities Dr. Charlie Rieck provided to me and his others students as they establish their careers in the Plant Sciences."

-Dr. Rick Carringer, Alumni and Contributor



Interested in donating to the  
Rieck Award?  
Visit <https://bit.ly/38tdsHv>



## New Undergraduate Degree Program

### Agricultural Ecosystem Sciences (AES)

In Fall 2019, the Department of Plant and Soil Sciences started a new undergraduate B.S. degree program – Agricultural Ecosystem Sciences (AES). The goal of this program is to equip students with the knowledge and skills required for the responsible stewardship of our agricultural production systems. Responsible stewardship means the application of advanced methodologies to increase yields from, and the multifunctionality of, current agricultural lands providing solutions that optimize local, regional, and global benefits people gain from agricultural ecosystems.

Community partners help our students further their academic and professional careers by providing networking opportunities, a wealth of experiences in real agricultural settings and the potential for future employment. The AES program currently has 21 students enrolled. If your organization is interested in connecting with our students, let us know.



Connect with AES students by visiting  
[https://uky.az1.qualtrics.com/jfe/form/  
SV\\_3xc5mCHonRuLzwx](https://uky.az1.qualtrics.com/jfe/form/SV_3xc5mCHonRuLzwx)

Also, be sure to check out the new AES  
website! <https://aes.ca.uky.edu/>

## Retirement



Dr. Todd Pfeiffer, Professor of Plant and Soil Sciences, will be retiring at the end of December. Dr. Pfeiffer joined the faculty in what was then the Department of Agronomy in 1982. After earning his B.S. in Agronomy at UK, he went north to the University of Wisconsin to do graduate work in alfalfa breeding and genetics. During his time in Wisconsin, Dr. Pfeiffer met his future wife Janet, and when UK offered him the soybean breeding position late in 1981, the Pfeiffers traveled south to Lexington to take up residence there. Dr. Pfeiffer developed new soybean cultivars and published groundbreaking research on soybean breeding methods, but he also

carried out unique research on genetic recombination, publishing numerous scholarly papers and training many graduate students. Dr. Pfeiffer was a staunch advocate for the importance of teaching undergraduates and never hesitated to take on the largest, most demanding undergraduate courses. In 2009, seeking a change in direction, Dr. Pfeiffer became Chair of Plant and Soil Sciences, a very demanding position he held until 2017. During his tenure as Chair, the department hired 14 new faculty members whose expertise spans the breadth of our discipline. Based on the depth and productivity of his scholarly research, his strong commitment to undergraduate education and his impact as Chair, Dr. Todd Pfeiffer leaves Plant and Soil Sciences with a record of tremendous accomplishment and the gratitude of the entire department.

Dr. Pfeiffer's former students describe him as a man who is short on words but tall on action. He is a devoted and caring mentor – not just in the academic careers of his students, but in their professional and personal development. Dr. Pfeiffer has had a tremendous impact on not only the future of plant breeding, but also the lives of those that he touched as an educator.

Dr. Pfeiffer's retirement plans are quite vague. He and his wife, Janet, want to visit the grandkids in Wisconsin several times each year. They hope to do some hiking and visit some National Parks. He just bought a few acres and plans to continue some edamame breed and grow more vegetables than they can eat. He has signed up for a par 3 golf league starting Summer 2021.



## Photo Collection



## Upcoming Events

When it becomes safe, we hope to welcome you back to campus for the following events:

**CAFE Roundup | IPSS Symposium | Outstanding Career Alumnus Award Seminar**

**IPSS Early Career Alumnus Award Seminar**

**S.H. Phillips Distinguished Lecture in No-Till Agriculture | and more!**

## Share your Success Story!

[https://uky.az1.qualtrics.com/jfe/form/SV\\_88LbbRtamyKDRpH](https://uky.az1.qualtrics.com/jfe/form/SV_88LbbRtamyKDRpH)

## Event Calendar

The Department maintains a calendar with upcoming events (including virtual), seminars, field days, etc. Be sure to check it out!

<http://pss.ca.uky.edu/calendar/month>