The year of 2020 will certainly be one to remember (or soon forget)! A large majority of classes at the UW continued to be offered on-line during the fall 2020 semester (including all of our agronomy courses), but we had a successful semester and persevered, adapting to the virtual learning world and learning new ways to effectively offer our classes. The same is generally true for the spring semester 2021, but Chancellor Blank has made it clear that we expect to return to normal face-to-face course offerings in fall 2021. Hopefully, we can all see a bit more light at the end of the dark tunnel and gradually return to a more normal situation during fall.

As you may be aware, the UW system experienced a significant decline in revenue during the pandemic, and departments were faced with figuring out how to deal with substantial budget cuts (agronomy absorbed a $86,000 cut to its annual budget for FY22 and beyond). On the positive side, the Department of Agronomy continues to be a CALS leader in research funding (over $5M in total expenses on grants in FY20) and extension productivity (over $28M of estimated information value provided to clientele last year). We are strong in many areas and will weather this storm as we have done so many times in the past.

On the teaching side, Prof. Valentín Picasso has reformatted Agronomy 377 (now called Global Food Production and Health) to be offered as a core course offering in support of the new Global Health major in CALS. Prof. Randy Jackson has been leading the development of a new undergraduate major among several CALS departments (called Agricultural Ecosystems). Two new courses will also be offered during summer 2021; one has been led by Dr. Gregg Sanford (called A field guide to farming) and will be an on-line course open to both undergrads and graduate students. A second summer in-person course is being led by Bill Tracy, Natalia de Leon and Calli Anibas called Field Methods for Crop Research.

There has also been activity in Moore Hall that most people probably haven’t noticed, because hardly anyone is in the building on a day-to-day basis. The Wisconsin Crop Improvement Association (WCIA) has found new space and a new home in Middleton at the Wisconsin Crop Innovation Center (WCIC), which will allow them to hopefully take on new business and expand their capabilities.
Oyen Wins Awards

Tanner Oyen, sophomore/junior Agronomy major, was awarded Helena Intern of the Year and the 2020-2021 Sophomore Research Fellowship.

Tanner’s internship was based out of Helena’s Edgerton, WI, Wholesale Branch. He serviced local retail locations and positioned Helena Products with them, along with their customer base. He spent time keeping track of Helena research plots and sharing the data he found. Tanner knew his main goal was to help farmers grow productive and resilient crops. Every aspect of his internship was beneficial, including building lasting relationships with retail customers and farmers, meeting with support personnel to answer agronomic questions, and spending time in the field analyzing developmental differences in test plots. This award is designed to encourage creativity, innovation, and hard work among the intern team and to assist with college expenses.

The Sophomore Research Fellowship is funded by generous grants from the Brittingham Fund and the Kemper K. Knapp Bequest. It provides research training and support to undergraduates. Students have the opportunity to undertake their own research project in collaboration with UW–Madison faculty or research/instructional academic staff. Currently, Tanner is working with Lucía Gutiérrez in the Cereals Lab.

Tanner began competing in Agronomy contests in high school, competing at UW-Madison every year. It is here he found his love for agronomy and UW. Along with his major in Agronomy, he is working toward a certificate in Business Management. Post graduation, he is considering careers in research and development, agronomy sales, and as an agronomist—somewhere he can lead and manage people. Tanner is from Lancaster, WI, and in his spare time, he enjoys hunting, fishing, investing, and spending time with his friends.

Congratulations, Tanner!


Grad Student Spotlight

Angela Leon is a first-year PhD student in Agronomy. During her first Master’s program, her research was focused on the relationship between quality and quantity of carbon stocks and the floristic composition in High Andean wetlands, as well as the estimation of the productive conditions for grazing of these wetlands. For her second M.Sc. thesis, she screened and optimized low-cost lignosulfonates as legume and hay preservatives to decrease losses of dry matter and nutritive value due to spoilage. For her PhD, she is working under the supervision of Dr. Randy Jackson. Angela wants to focus her research on the effects of intensive grazing on the nutritional value and biomass of forage, soil quality, and green gas emissions.

Education

Tracy named AAAS Fellow

William F. Tracy was named Fellow by the American Association for the Advancement of Science. This distinction recognizes important contributions to STEM disciplines, including pioneering research, leadership within a given field, teaching and mentoring, fostering collaborations, and advancing public understanding of science.

To be named a Fellow, a tradition dating back to 1874, one must be nominated by three previously-elected Fellows, the steering group of an AAAS Section, or the organization’s CEO. Each nomination goes through a two-step review process.

Bill is a national leader in plant breeding and germplasm, who has trained a generation of breeders and communicated breeding’s importance to the public.


Picasso, Others Awarded Grant

A multi-state coalition of researchers, farmers, educators, industry leaders, policy experts, and climate scientists was recently awarded a competitive 5-year, $10 million grant through USDA NIFA’s Agriculture and Food Research Initiative’s (AFRI) Sustainable Agricultural Systems program to scale the research, production, awareness and commercialization of Kernza®, the first commercial perennial grain in the United States. Valentín Picasso is a co-PI on the project, as well as fellow Agronomy professor, Dave Stoltenberg, and others from UW-Madison and other institutions. The source and the rest of this article can be found here.

Picasso, et al, Win Outstanding Paper Award

Valentín Picasso, as lead author, won the 2020 Crop Science Outstanding Paper Award (3rd place) for the Forage and Grazinglands division (C6), with contributors and fellow Agronomy faculty Mike Casler and Dan Undersander. This award honors members who have made important contributions to the study of crop science. The paper’s title is “Resilience, stability, and productivity of alfalfa (Medicago sativa L.) cultivars in rainfed regions of North America.” Read it here.

Gutiérrez Receives Grants

Lucía Gutiérrez received two grants from NIFA. One is for a project entitled, "Value-Added Grains for Local and Regional Food Systems," and the "project will add value and knowledge in the production and marketing of specialty food grain crops to improve farm economics with the goals of increasing their utilization and enhancing the biodiversity and sustainability of organic farms." Gutiérrez is collaborating with Julie Dawson (Horticulture) on both projects.

The second grant is for a project entitled, "Developing Multi-Use Naked Barley for Organic Farming Systems II." This project’s aim is "to provide organic gardeners, growers, processors, and consumers with an alternative crop, food, and raw material that will be economically rewarding and sustainable."

NIFA recently announced 32 grants totaling $23 million, that support farmers and ranchers who grow and market high-quality organic food, fiber, and other products through NIFA’s Organic Agriculture Program’s - Organic Agriculture Research and Extension Initiative (OREI) and Organic Transitions Program (ORG). Twenty OREI grants totaling $17 million help fund research, education, and extension projects to improve yields, quality, and profitability for producers.

Please see Gutiérrez, pg. 8.
Chamberlain Wins Poster Competition

Lindsay Chamberlain won first place in the Ph.D. student "poster and 5 minute rapid oral presentation" competition in the C3 division at the ASA/CSSA/SSSA 2020 annual meetings. This competition encourages students to pare down their research findings for a "rapid fire" talk, then provide a more detailed account in a poster format. Lindsay’s presentation focused on her recent publication, which looked at the impacts of crop rotation and foliar fungicides on corn and soybean yield and soil fungal communities. Lindsay plans to graduate from the Shawn Conley’s Bean Team in early summer 2022, and hopes to pursue a career in Extension.

Submitted by Lindsay Chamberlain & Valentín Picasso

Grad Students Win Awards at NCWSS

Felipe Faleco, Jose Junior Nunes, and Kolby Grint earned awards for their presentations at the North Central Weed Science Society Annual Meetings in fall of 2020.

Felipe Faleco, advised by Rodrigo Werle and Dave Stoltenberg, won 2nd place in the Weed Biology, Ecology and Management poster competition. His poster’s title was “Evaluation of Putative Resistance in Wisconsin Giant Ragweed (Ambrosia trifida) to Group 2, 9, and 14 Herbicides.”

Jose Junior Nunes, advised by Werle, won 2nd place in the Research Video Contest with his “Impact of soil and cover crop management strategies on the deposition and fate of PRE-emergence herbicides in soybean cropping systems.” View his video here.

Kolby Grint, also advised by Werle, won 2nd place in the Extension Video Contest with his “Understanding the Visuals of Herbicide Symptomology” video. You can watch it here.

PSGSC Elects Officers

The Plant Sciences Graduate Student Council held elections for its 2021 leadership. Korede Olugbene (right, top) was elected President, and Erica Shoenberger (right) was elected as the Agroecology Representative. Both students are in the Agroecology Program and advised by Valentín Picasso.
New Faces Join the Jackson Lab

Randy Jackson and crew welcomed several new people to their program this spring: Anna Orfanou, Jacob Henden, and Angela Leon.

Anna Orfanou is a Research Associate in the Jackson Program. Her current research focuses on calibrating and validating Agro-IBIS simulation model for studying how cover crops growing in various cropping systems affect carbon, nitrogen, phosphorus, and water dynamics. Anna received a B.S. in Agricultural Sciences from the University of Thessaly in Greece before obtaining a M.S. in Biosystems Engineering with specialization on Automation and System Technology from Aarhus University in Denmark. Her interest in decision support systems (DSS) and precision agriculture led her to the University of Georgia, where she joined the Georgia Precision Ag team while pursuing her Ph.D. in the Department of Crop and Soil Sciences. The focus of her Ph.D. was on the management and simulation of agronomic practices for pursuing high maize yields. Anna believes that DSS can assist in the decision making process for the benefit of the growers and the environment.

Jacob Henden is a PhD student in the Nelson Institutes Environment and Resources program, with a background in entomology and an interest in landscape studies, conservation, and sustainable agriculture. He will be researching effects of land cover composition and configuration on stream-water quality in Southwestern Wisconsin. This project intends to provide useful information to farmers, industry, and policymakers for the

Please see Jackson, pg. 8

Updates from the Picasso Lab

Valentin Picasso has several people new to his program this spring. Soledad Orcasberro, PhD student, arrived from Uruguay to work on a research project on alfalfa yield gap and soil health. Priscila Pinto, featured right, is a post-doc working on Kernza CAP research. Krishna Bhandari, from Nepal, is another post-doc, working on the alfalfa resilience project.

Grad student, Korede Olugbenle, wrote his thoughts on racial justice, which were featured in the Civic Scientist Series by Green Lands Blue Waters. Korede, “a kid from Nigeria who likes plants,” hopes for a future in our field ripe with diversity “in backgrounds, gender, and race.” His work can be found here.

A paper on Kernza, co-authored by Picasso, earned the Agricultural and Forest Meteorology journal’s Editors’ Choice distinction and was highlighted on the journal’s website. The paper, “Process-based analysis of Thinopyrum intermedium phonological development highlights the importance of dual induction for reproductive growth and agronomic performance” can be found here.

Another paper, “Perenniality and diversity drive output stability and resilience in a 26-year cropping systems experiment” will be published this year in Field Crops Research (Sanford, G.R., R. Jackson, E. Booth, J.L. Hedtcke, and V. Picasso). We applied the resilience assessment methodology developed by Picasso et al. (2019) to analyze resilience and stability of cropping systems output using 26 years of data from the Wisconsin
Update from the Bean Team

Submitted by Emma Matcham

The Bean Team was very busy in 2020. Dr. Shawn Conley safely returned from his sabbatical in Spain in July. Haleigh Ortmeier-Clarke has greatly expanded the lab’s small grain research by planting winter wheat, rye, spelt, and barley this fall and will plant a plethora of spring small grains in March to begin her PhD research on small grains resiliency. Lindsay Chamberlain and Emma Matcham are inching towards their PhD defenses and presented at the Wisconsin Agribusiness Association annual meeting in January on soil microbiomes and foliar fertilizers, respectively. John Gaska and Adam Roth continue to keep Dr. Conley in-line and have agreed to participate in a project-wide, rapid paper-writing adventure!

Given the challenging year we have all had with Covid-19, the UW Bean Team would like to offer a change of pace and take this opportunity to introduce … our COVID pets! Fred and Barney Matcham joined the team in 2019 and have resided with the Matcham family since 2009. They are demanding writing supervisors, excellent cleaning buddies, and very good boys. Penny Roth joined the lab in 2019. She enjoys having her family home to play with and helps keep the virtual learners on task. Penny is a very sweet girl. Tally (Chamberlain) Malone has been with lab since 2017 and is a frequent attendee of PSGSC socials. Tally has been a great big sister to Willow, a new addition to the lab in 2020. The Malone puppies love to attend virtual talks from the couch with Lindsay and are very good girls. The newest member of the lab, Judy Good Moody Conley, joined the Bean Team this fall. Judy is an Alabama rescue dog and was a surprise to Dr. Conley. Judy enjoys snitching family socks and running away from her people in joy as they chase her before she shreds them. For the most part, Judy is a very good girl. Willow and Judy got to hang out in October and were fast friends! Haleigh is currently looking for the next furry friend to join the Bean Team but enjoys updates from home on the shenanigans of Molly Clarke. Molly enjoys stealing corn cobs, tractor rides, and belly scratches! John patiently listens to all our dog stories.

Chair, continued from pg. 1

In their wake, the space on the 5th floor in Moore Hall is in need of some improvements and renovation (including a leaky roof on the east side of the building) which will occur in the coming months. Pat LeMahieu, who was directing Wisconsin Foundation Seeds (WFS), retired in September 2020, and since then, the oversight of WFS has transitioned to staff at the Arlington Agricultural Research Station. We thank Pat for all of his hard work in directing WFS for the last several years and wish him well!

Finally, Professor Stanley H. Duke announced his retirement as of January 31, 2021. Professor Duke’s university service spanned 42 years on the faculty of Agronomy where he served as Associate Chair for three years and Department Chair for another 11 years. He contributed more than 100 peer-reviewed publications and book chapters covering many
If you are a grad student looking to connect with peers who have had similar experiences, consider joining a Student Identity Group, run by our Student Identity Liaisons. Students can connect with their liaisons and/or group members for support, resources, or advocacy. Liaisons will also collect contact info of students and create whatever community space is desired, whether it’s group chats or Slack channels, regular meetings, or just a list of emails. Groups for students of color, students with children, neurodivergent students, LGBTQIA+ students, international students, and students with disabilities. Please contact the Plant Sciences Graduate Student Council’s Vice President, Guolong Liang (gliang6@wisc.edu) for more information.

All undergraduate and graduate students who are enrolled for credit (and pay segregated fees) can use University Health Services for physical and mental health care.

UHS also provides services for post-docs, faculty, and staff.

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Deadlines to apply to the Agronomy Graduate Program or the Plant Breeding Plant Genetics Graduate Program:

September 1 for spring entry
December 1 for summer and fall

For more information please contact: Caitlin Collies
caitlin.collies@wisc.edu
608-262-1390

The Badger Crops Club now has their own newsletter! Find the first (and future ones) here!

GRE no longer required!
Gutiérrez, continued from pg. 3

and processors who have adopted organic standards. Twelve ORG grants totaling $5.6 million supports research, education, and extension efforts to help existing and transitioning organic livestock and crop producers adopt organic practices and improve their market competitiveness.

This work is supported by the Organic Research and Extension Initiative grant no. 2020-51300-32379 from the USDA National Institute of Food and Agriculture.

Source for above announcement [here](https://aua.org/). Direct quotes above are taken from each project’s non-technical summary.

Picasso, continued from pg. 3

Integrated Cropping Systems Trial (WICST), and found that perenniality increased stability, and diversity increased resilience to drought. This project was funded by Hatch grant WIS01986, AFRI 2019-67013-29202, and Center for Integrated Agricultural Systems (CIAS).

This is a relevant paper on a long-term study started 30 years ago by Agronomy Professor Josh Posner, to whom this paper is dedicated.

Jackson, continued from pg. 5

conservation management of watersheds. Jacob holds a B.S. in Ecology and Environmental Biology from the University of Wisconsin-Eau Claire (2015) and an M.S. in Entomology from the University of Wisconsin-Madison (2019).

Angela Leon is featured in the Grad Student Spotlight on Page 2. Please read her bio there.

Chair, continued from pg. 6

areas of plant sciences including chrono and photobiology, cold acclimation, freezing tolerance, nitrogen fixation and metabolism, starch degradation and seed germination. He integrated knowledge from many of these areas to develop innovative methods to measure malt quality. Stan’s contributions to teaching include courses on forage physiology, the physiology of dry matter accumulation, and the Agronomy Capstone course for seniors. We will certainly miss him in the department, and congratulate him on such a long and distinguished career here! We hope to plan a celebration sometime down the road when we can all be together in person.

As always, we are extremely grateful for the continued support of our alumni, emeritus faculty, staff, and other friends. I wish you all continued good health and better tomorrows!

On Wisconsin!  

In Memoriam


John Leroy Quimby, age 74, passed away on December 28, 2020, due to glioblastoma cancer. The eldest of 5 children born to Wilbur Quimby and Mary Quimby (Fuchs) in Frederic WI, on May 6, 1946, John honed his good-natured personality and storytelling aptitude on his family farm in Clear Lake WI. Source and the rest of John’s obituary can be found [here](https://aua.org/).