



College of Agriculture, Food and Environment

DEPARTMENT OF PLANT AND SOIL SCIENCES

ALUMNI NEWSLETTER

Fall 2022, Issue III

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 mission (teaching, research, and extension) and in areas of interest (crop science, environmental science, plant molecular biology, and soil science). The Department has ~40 faculty members as well as post-doctoral scholars, graduate research assistants, and visiting scholars.

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Welcome

Welcome to the third 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 an 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://uky.az1.qualtrics.com/jfe/form/SV_8A49ZR8vojrIaup.

Message from the Chair

Greetings Alums!


The Fall semester has begun, with UK welcoming the largest freshman class ever. Although COVID persists, campus feels more normal than it has in a while. Unfortunately, that is not true for our people located at UKREC in Princeton or RCARS in Quicksand. Natural disasters have had an inordinate impact on those communities. We support our affected people as best we can, but it has been very tough for them. We chose not to highlight these situations in this newsletter, as they have received significant press coverage and we know those most impacted are weary. Recovery is slow and frustrating, but it is underway. Temporary offices are being installed at UKREC as I write this. We hope that next newsletter we will be able to report significantly more re-build progress.



We welcomed **14 new graduate students** this year and **7 new undergraduates** in the Agricultural Ecosystem Science (AES) degree program. AES graduated its first crop of students this past Spring, which is a major achievement. We recruited **a new faculty member** this year (yay!) and celebrated the retirement of a few folks too. We were also able to connect with some of you via the first annual PSS RoundUp alumni event and by celebrating the induction of the Carringer's into the College's Hall of Distinguished Alumni. Please join us for the **PSS RoundUp Alumni dinner this coming Oct. 7.**

I hope you enjoy this third issue of our alumni newsletter.

Sincerely,

A handwritten signature in black ink that reads "Rebecca L. McElroy".

IPSS Symposium 2022



The 2022 Dr. Donald L. Sparks & Dr. Bill Witt Integrated Plant and Soil Sciences Graduate Student Symposium was planned for January 7th, 2022 with both oral and poster presentations scheduled in person. However, a snowstorm derailed the original plans. The oral presentations were held via zoom on January 7th and the poster presentations were held in person on February 25th.

Student award winners pictured above, from left to right: Jason Simmons, Tim Shull, Andrea Keeney, & Sapana Pandey. Awards presented by Dr. Jason Unrine, center.



Oral Presentation Winners:

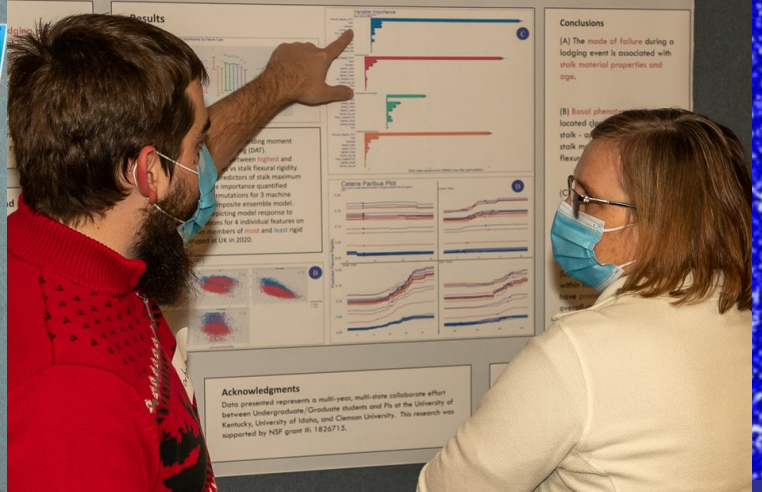
1st—Maria Paula Castellari, 2nd—Jordyn Bush, 3rd—Andrea Keeney



Poster Presentation Winners:

1st—Tim Shull, 2nd—Sapana Pandey, 3rd—Jason Simmons

IPSS Symposium 2022

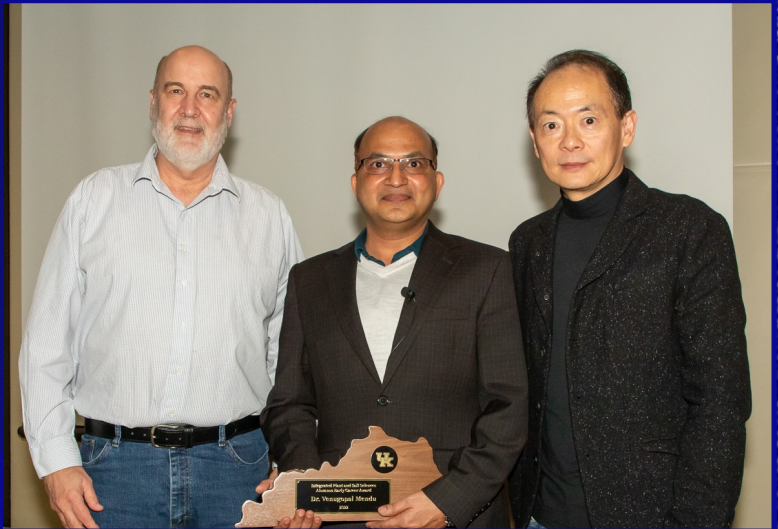


Alumni Awards

IPSS Alumni Early Career Award

Dr. Venugopal Mendu is the recipient of the 2022 IPSS Alumni Early Career Award. Dr. Mendu was recently selected as Montana State University's Endowed Plant Science Chair. "The selection of Dr. Mendu will help take MSU's Plant Science Department to the next level in plant breeding research." Read more about Dr. Venugopal Mendu's new position here:

[Dr. Mendu selected as Montana State University's Endowed Plant S - \(rfdvtv.com\)](https://www.rfdvtv.com/Dr.-Mendu-selected-as-Montana-State-University-s-Endowed-Plant-S/)



Dr. Mendu (center) was advised by Dr. Art Hunt (left) & Dr. Ling Yuan (right)



Current IPSS graduate students with Dr. Mendu (left to right): Andrea Keeney, Jordyn Bush, Dr. Venugopal Mendu, M.Foteh Ali, and Paul Cöckson.

Carringer Reception

It was a pleasure to have alums Rick and Sandra Carringer spend time with us at the IPSS Poster Session before they were inducted into the College's Hall of Distinguished Alumni that night (February 25, 2022).



Bill and Mary Witt catching up with the Carringer's.



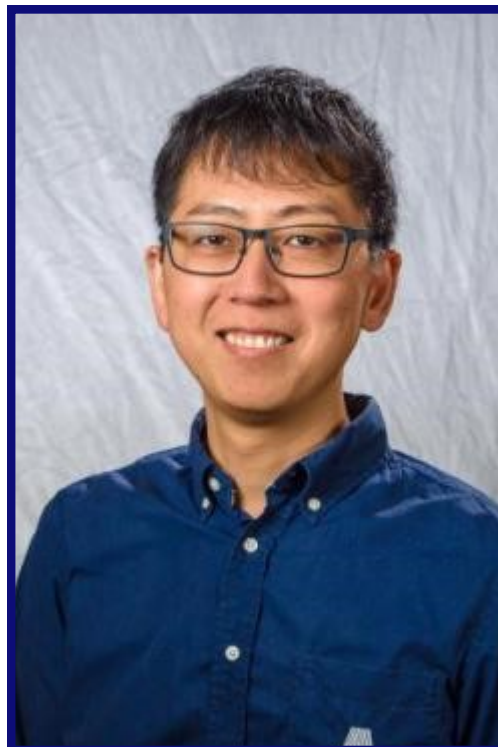
Rick and Sandra Carringer celebrating their induction into the College's Hall of Distinguished Alumni with Dean Cox.

Faculty Promotions



Congratulations to Dr. Carrie Knott
on being promoted to Professor in
the Extension Title Series!

Congratulations to Dr. Tomo
Kawashima on being promoted to
Associate Professor with tenure in
the Regular Title Series!



IPSS Annual Grad Student Awards



**M. Foteh Ali – 1st Place
IPSS Continuing PhD**



**Sanjay Joshi – 2nd Place
IPSS Continuing PhD**



**Alayna Jacobs – 3rd Place
IPSS Continuing PhD**



**Ammar Al Zubade –
Honorable Mention
IPSS Continuing PhD**



**Jordyn Bush – 1st Place
IPSS Continuing MS**



**Danielle Doering – 1st Place
IPSS New MS**

Awards presented by Dr. Erin Haramoto and Dr. Rebecca McCulley.

Annual Plant & Soil Science Grad Student Awards

TeKrony Travel Fellowship in Seed Biology



Tajbir Raihan

Ashwini Shivakumar

In recognition of academic excellence and professional development in the area of seed-related research.

Peaslee/Phillips Award

Johnston/Carringer Award



Alayna Jacobs

Brian Rinehart

Awards presented by Dr. Ole Wendroth

Shirley Phillips No-Till Award



Barry Fisher and Dr. Rebecca McCulley

Barry Fisher was the recipient of the 2021 Shirley Phillips No-Till Award. This annual award is given to individuals whose career has been devoted to promoting no-till practices. Barry Fisher retired after 39 years with the USDA-Natural Resources Conservation Service. Most recently he was with the Soil Health Division where he served as Central Region Leader providing training, leadership, and technical exchange for Soil Health Management Systems for NRCS, farmers stakeholders and partners throughout the Corn Belt and Northern Plains.

He was recognized as one of the 25 Living Legends of No-till at the National No-Till Conference. He was given the Hugh Hammond Bennett Conservation Legacy Award from NRCS for his contribution to the “Unlock the Secrets in the Soil” campaign to improve soil health. Since retirement, Barry has launched Fisher Soil Health LLC—Consulting as a next step on this soil health and regenerative farming journey.

Faculty Retirement

Dr. Mark Coyne, Professor of Plant and Soil Sciences, retired in June. Dr. Coyne joined the faculty in 1991 as an assistant professor and became full professor in 2006. After earning his B.S. in Agronomy and International Agriculture from Iowa State University, he headed west to earn his M.S. in Soil and Environmental Science from the University of California, Riverside. Then he went on to earn his Ph.D. from Michigan State University in Crop and Soil Science (Soil Microbiology).

During his 30 year career at UK, Dr. Coyne taught numerous courses, advised undergraduate students, and trained 10 PhD and 13 MS students, while also serving on the committees of another 70(!) graduate students. Dr. Coyne led the effort to create the Integrated Plant & Soil Science (IPSS) graduate degree program. The creation of this multi-departmental, interdisciplinary degree program took years of effort. Once created, Mark generously served as the Director of Graduate Studies for the program for the following decade. In this position, he shouldered the full weight of all new program administration. He created the necessary new courses, he created programmatic assessments and dealt with programmatic reviews, he taught the required courses, and he oversaw all student inquiries and applications. We estimate that Dr. Coyne helped >500 IPSS graduate students be successful over the course of his career. For these achievements, Dr. Coyne was the 2021 recipient of the College's George E. Mitchell Jr. Award for Outstanding Service to Graduate Students, and in 2020, he received the William B. Sturgill Award from the Grad School for outstanding contributions to graduate education.



Staff Retirements



Marcy Rucker—35 Years of Service



James Roberts—34 Years of Service



Roger Rhodes—31 Years of Service

We thank these faculty and staff for their years of service to the Department and wish them the best in their next endeavors.

New Faculty

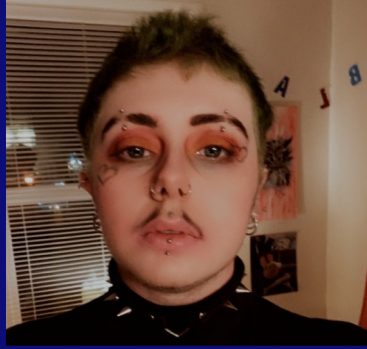
We are excited to announce that Dr. Lauren Brzozowski has recently joined the department as an Assistant Professor in Molecular Breeding and Genomics. Lauren began working in plant breeding during her undergraduate degree at University of Wisconsin – Madison. She then attended Cornell University, and her dissertation explored the genetics of insect resistance in squash, as well as applied participatory plant breeding of disease-resistant cucumbers. After completing her PhD in 2020, she continued at Cornell University and subsequently the USDA -ARS for a postdoctoral research position. In that position, her work included genomic research to understand and select for important nutritional traits in oat. She was thrilled to join the Plant and Soil Sciences department at University of Kentucky in August. She is looking forward to conducting plant breeding and genetic research in winter oats and winter rye, as well as contributing to undergraduate and graduate instruction in genetics and genomics.



New IPSS Grad Students



Alec Besinger



Hans Brown



Danielle Doering



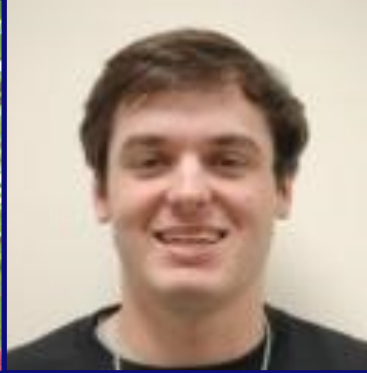
William Fleming



Kinsey Hamby



Letícia Pacheco Inoue



Hayden Love



Eric Luteyn



Robert Nalley



Conner Raymond



William Rich



Gavin Saunders



Lauren Seltsam



Sara Valdimarsdottir



Yifei Wang



Xia Wu

New AES Students



David Burton



Luke Daugherty



Sarah Johnson



Riley McLaughlin



Jacob Reeves



Kylie Ryan



Anyi Williams

Agronomy Club



The Agronomy Club is very excited for the upcoming 2022-2023 school year! As a club we strive to stimulate interest in Agronomy among students in the College of Agriculture, Food, & Environment by providing opportunities with industry and university professionals. The club is very focused on learning more about what is happening in the industry.

As a club we are affiliated with Students of Agronomy, Soils, and Environmental Sciences (SASES), which is an undergraduate program that provides leadership opportunities as well as networking with other universities. This organization is affiliated with the Tri-Societies: American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA). Each year we [have the opportunity to](#) attend the Annual National SASES meeting and this year this event is taking place November 6th-9th in Baltimore, Maryland.

As a club we have been fundraising to attend this event to cover the cost of registration, transportation, and meals while we are there. Last year we grew blue and white popcorn in our effort, and we will be selling that throughout this semester on campus. Any additional support to attend this event would be greatly appreciated!

Pictured above (left to right) is our 2022 officer team: Sydney Knickel (Communications Chair), Cortne Curnel (President), Samantha Klotz (Vice President), Maggie Gillum (Treasurer), and Megan Johnston (Secretary).

If you want to support the Agronomy Club follow this link and put "Agronomy Club" in the comment box.

[University of Kentucky - Plant and Soil Sciences Enrichment Fund \(networkforgood.com\)](https://networkforgood.com)

Around the Farm



Matthew Allen being interviewed about the new mural at North Farm.

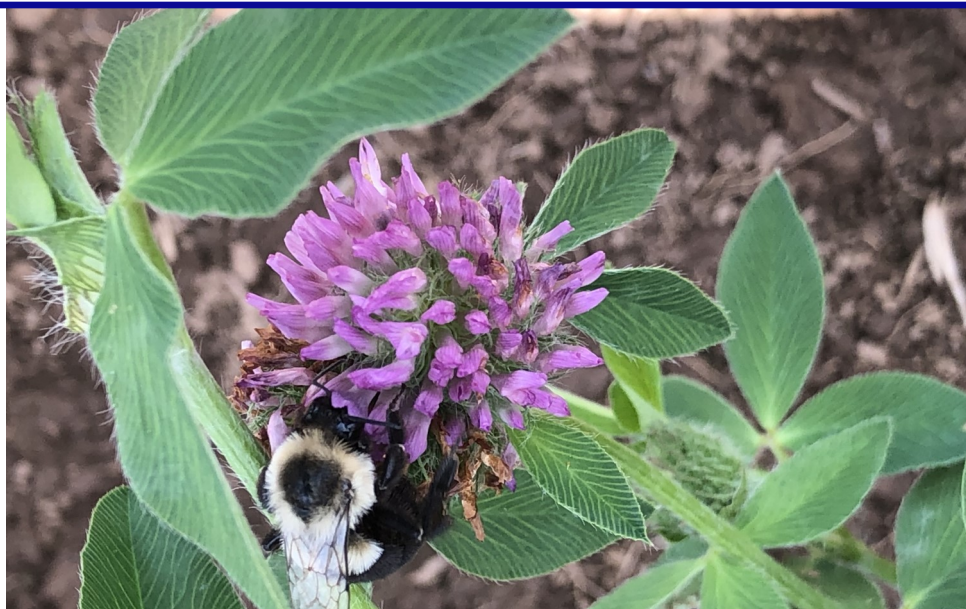


Philip Shine (right), Joyce Shariz, Bill Bruening's sister (left), and Bill Bruening (in combine) harvest wheat at Spindletop.

Developing a Herbicide Tolerant Red Clover

Developing a Herbicide Tolerant Red Clover for Kentucky

Adding red clover into grass-based pastures has many benefits but red clover is highly susceptible to herbicides, such as 2,4-D, used for broadleaf weed management in pastures. In 2005, Dr. Norman Taylor began a project to create a 2,4-D tolerant red clover for Kentucky by crossing a 2,4-D tolerant red clover line from the University of Florida with Kenland red clover. We took over responsibility for the project when Dr. Taylor retired. Over the next 9 years, the progeny from this cross were subject to further selection, treating them with ever higher rates of 2,4-D and preserving the best survivors. To test the 2,4-D tolerance of the resulting red clover line, designated as UK2014, we conducted a field test comparing the 2,4-D tolerance of UK2014 to Kenland. A portion of the results are shown below.



Bumblebee Pollinating Red Clover

Regrowth of UK2014 and Kenland following 2,4-D Treatment and One-Week after Harvest

While UK2014 is clearly more 2,4-D tolerant than Kenland, we wanted to see if further selection, under very severe pressure (dipping plants into a 2,4-D solution), could raise the tolerance of UK2014 to 2 Lb. per acre of 2,4-D. Plants grown from seed of plants which survived this treatment through 2 rounds and are currently being grown in the field by Ray Smith and Gabriel Roberts to increase the seed from the selected population.

This involves growing the plants in cages to prevent cross-pollination from other red clover, introducing bumble bees (the preferred bee species for pollinating red clover) to the cages, and harvesting the seed produced. Initial greenhouse trials indicate the new selection is more 2,4-D tolerant than UK2014 and, when additional seed is available, this will be tested in field trials.

Faculty Awards

Dr. Hanna Poffenbarger Recipient of 2021 New Innovator in Food & Agriculture Research Award



Professor Hanna Poffenbarger, left, and grad student Danielle Doering, right, working on a soil carbon study.

FFAR's New Innovator in Food & Agriculture Research Award provides early-career scientists with funding to conduct audacious food and agriculture research. Poffenbarger's research is determining how living roots and decaying litter affect soil organic matter in low and high fertility soils and evaluating cover crops as a tool to capitalize on the benefits of roots in cropping systems.

Poffenbarger believes that her research will be very beneficial in helping the Earth reverse some of the effects of climate change.

Read more about Poffenbarger's award and research at the following websites:

[FFAR Announces New Innovator in Food & Agriculture Research Awardees - Foundation for Food & Agriculture Research \(foundationfar.org\)](https://www.foundationfar.org/)

[UK researcher recognized for soil research | Morning Ag Clips](#)

Turf Program Updates



Kenneth Clayton was brought on as an Extension Associate in Turfgrass in June 2022. He has jumped right into assessing and servicing the turfgrass needs across the state, of which there are many. He has been working closely with three extension agents who have turf appointments ensuring that the UK turf program is meeting the needs of stakeholders, as well as assisting and collaborating with specialists and county agents on turfgrass. Kenneth has been working closely with the Kentucky Horticulture Council to plan for the upcoming 46th annual UK Turf and Landscape Management Short Course. This event will provide pesticide training, certification testing, and continuing education to approximately 500 professionals from across the state. Please view the UK Turfgrass website for regulate updates at [Home | Turfgrass Science \(uky.edu\)](https://www.uky.edu/turfgrass)

International Thanksgiving



There has been a gathering of International PSS/IPSS graduate students and visitors at Ann Freytag's house for approximately 19 years with the last two years being only by way of Zoom. For this upcoming Thanksgiving 2022, Ann is planning to bring back the in person gathering for mainly the current IPSS international graduate students on Friday evening. Any alumni wanting to attend this event can join the Zoom only gathering the Saturday evening of November 26th, 2022. If you would like an email invitation to the Saturday Zoom only event, please email Ann at afreytag@uky.edu.

Catching up with Alumni



Andrea Keeney and Ben were married on December 11, 2021, in Pine Grove, KY, surrounded by their closest family and friends. Ben is to graduate this December with a degree in Sustainable Agriculture. He is also a tobacco producer in the Fayette-Clark County area. Andrea has a projected graduation date of May 2023. They recently purchased a house in Winchester, KY, and are excited to begin a new chapter of their lives there. As most know, December 10, 2021, was when the tornado destroyed the Research and Education Center in Princeton, KY. They spent the majority of the night watching the news and checking on individuals that Andrea works with. Andrea started her time at UK in 2015 as an intern working with Andy Bailey, so Princeton became her home away from home. We will remember our wedding day in more ways than one.

Noah and Amber Herman met through 4-H Camp as campers at Camp Palmer in Ohio. They grew up only 5 minutes apart in Putnam County though they did not attend the same school. They started dating their junior year of high school after working together as 4-H Camp Counselors. They dated 6.5 years before Noah asked the question along the river where they had their first date kayaking. Since getting engaged they have bought a house, adopted a Miniature Australian Shepherd named Ivy and a kitten named Vex. Noah attended the University of Toledo and Ohio University and is now a mechanical engineer. Amber attended The Ohio State University where she received a bachelor's degree in Agronomy and just graduated from the University of Kentucky this past spring with a masters in Weed Science. She now works as a Water Quality Extension Associate for Ohio State. Their wedding is September 10th, 2022 and they cannot wait to start the next chapter of life together.



Catching up with Alumni



Madison (Kramer) Haney (MS 2020) and her husband Adam Haney welcomed their son Baker James on August 2 at 2:35 AM. Baker was 8 lbs 10 oz and 22 inches long.



Dan Quinn (PhD 2020) married Ashley Jackson on August 13 in Michigan.



Jordyn Bush (MS 2022) married Brandon Dooley (BS 2022) on June 21 in Glacier National Park surrounded by their immediate family. Glacier National Park was their first vacation together as a couple, and they were excited to return to be married there a few years later.

Fall Seminar Schedule

Fall 2022 Seminar Schedule

3 PM, Cameron Williams Auditorium, Plant Science Building

<u>Date</u>	<u>Speaker</u>	<u>Title/Topic</u>	<u>Host</u>
Aug 26	Hanna Poffenbarger	Soil Nutrient Management in a Carbon Centric Era	McCulley
Sept 2	Montse Salmeron	Experimental and Modeling Research for Sustainable Intensification of Grain Cropping Systems	McCulley
Sept 9	Travis Legleiter	Building an Extension Weed Science Program in Kentucky	McCulley
Sept 16	Faculty Meeting		
Sept 23	Ram Dixit	Getting in Shape: Cortical Microtubes and Plant Morphogenesis	Kawashima
Sept 30	Amanda Ashworth	Data-driven Technology Applications for Improved System Sustainability	McCulley
Oct 7	Christine Hendren	Convergence Approaches to Wicked Environmental Problems: Phosphorus Cycling in the Appalachian High Country as Case Study	Jason/Jarad
Oct 14	Tanja Williamson	Linking Legacy Sediment and Phosphorus in an Agricultural Stream System	Brad Lee/ Tomo
Oct 21	3MT	TBD	IPSS
Oct 28	Brittany Harlow	Plant –Animal interactions in pasture	McCulley
Nov 4	Aaron Lorenz	TBD	Montse
Nov 11	Charlie Messina	Crop physiology, modeling, and improvement	Poffenbarger
Nov 18	No-Till Seminar	TBD	McCulley

Upcoming Events



2nd Annual
Plant and Soil Sciences
Alumni Roundup Event

Friday October 7th, 2022
5:00 - 7:00 PM, PSB Courtyard



Please join us for a relaxed evening of fun and food with friends.

Dinner will be provided.

Please [Click Here](#) to RSVP by September 23rd.