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November brings us to the close of this year’s growing season and the beginning of the holiday season.

Our department will celebrate Thanksgiving with the Department of Entomology on Tuesday, Nov. 20th with a pot luck meal. If you happen to be in the area, please feel free to stop in and have lunch with us. Serving begins at 11:45. The department will be closed Thursday, Nov. 22 and Friday Nov. 23 as we celebrate with our families.

November also brings us into meeting season, with the Agronomy Society of America (ASA) and Crop Science Society of America (CSSA) meetings leading the way. We look forward to the SSSA, Beltwide Cotton Conference, AgriLife Conference and more in the coming months.

Congratulations to all our faculty and students who were recognized or earned awards at the ASA, CSSA meetings. We are proud to say that Dr. Amir Ibrahim was selected as a Fellow for the ASA and Dr. Seth Murray was named a Fellow of CSSA (see the story on page 3). We were pleased at the number of students who presented posters or oral presentations at the meetings. Award winners can be found on page 7.

I had the opportunity to participate in the CAST annual meeting in Sacramento, California and to explore the potential for a Fermentation Science Program here by visiting the program at UC-Davis.

Congratulations go out to our former student, Dr. David Thompson ’64 who was recognized as an Outstanding Alumnus at the College of Agriculture and Life Sciences Legacy and Leadership Banquet earlier this month. His story proves that you never know where an Agronomy degree will take you! (see page 9).

Our Agronomy Society students had a very disappointing year with the corn maze, as the atypical rain pattern forced them to be closed nearly all month. We appreciate their hard work and dedication, despite the adverse conditions and commend them for a great corn crop.

We continue to have great success with grants with several of our faculty receiving news about grants in the past month. Opportunities are being explored with several companies at this time including Scotts, Bayer, Ardent Mills, Corteva, and Silver Palate. I appreciate those involved with hosting as they arrive for visits. We also are working with several to complement our efforts through visiting scientists and scholars. This includes arrangements with Stoller, and the Soil Health Institute.

The semester is winding down, with the next graduation to be December 14 at 2:00 p.m.

Saturday, December 15 will be my Holiday Open House. You are invited to stop by between 3:00 p.m. and 6:00 that evening to celebrate with us.

The department will be closed for the holidays December 24 through January 1. We will re-open with business as usual January 2, 2019. Hope you are able to join us for the Thanksgiving Feast on Tuesday and wishing you a Happy Thanksgiving!

You can support Soil and Crop Sciences research, teaching and extension outreach with your tax-deductible donations.

More Information can be found at: http://soilcrop.tamu.edu/giving/
Dr. David Baltensperger, Department Head for Soil and Crop Sciences at Texas A&M University, was one of ten people appointed to the National Agriculture Research, Extension, Education and Economics Advisory Board (NAREEEAB) by Agriculture Secretary Sonny Perdue. Each will serve for three years.

According their website, the board is comprised of 25 members, each representing a specific category of U.S. Agriculture stakeholders, and agrees to serve a three-year term. Baltensperger represents Category K - 1862 Land-Grant Colleges and Universities.

The board provides advice to the Secretary of Agriculture and land-grant colleges and universities on top priorities and policies for food and agricultural research, education, extension and economics. They also provide recommendations to the appropriate Congressional agricultural committees.

Read more about Dr. Baltensperger.

Dr. Amir Ibrahim was named as a Fellow by the American Society of Agronomy during the society’s annual meeting, which this year was held in Baltimore, MD.

Ibrahim, a professor and wheat breeder, leads the small-grains breeding program for our department. He manages wheat cultivar development for much of the state, as well as conducting research on oats and other small grains.

He has released/co-released 18 wheat and three oat cultivars. Eleven of these releases/coreleases produced viable seed in 2016 and covered more than 1 million acres in five states.

Ibrahim teaches crop stress management and a graduate level course in experimental designs in agriculture. He is also in demand as an international expert in areas of Mexico, northern Africa and parts of Asia and Europe.

Dr. Seth Murray was one of nine Fellows named by the Crop Science Society of America at their annual meeting in Baltimore, MD.

Murray, an associate professor, corn breeder, is the Butler Chair for Agricultural Biotechnology at Texas A&M University. He directs a research program focused on both quantitative genetic discover and applied corn breeding for Texas and the Southern U.S.

He was the first to conduct a genetic diversity study, according to his nomination, and among the first to conduct linkage mapping in bioenergy sorghum, in which Murray has phenotyped more than 50 different traits.

Murray teaches quantitative genetics and plant breeding.

Read more about Dr. Ibrahim and Dr. Murray
Dr. Murilo Maeda is returning to his roots when he trades the Texas coast for the South Plains to take the position as Texas A&M AgriLife Extension Service cotton specialist in Lubbock, effective Oct. 1.

“My family’s roots run deep into the cotton industry, and I would like to contribute to its improvement,” Maeda said, as he leaves his position as a Texas A&M AgriLife Research assistant research scientist in Corpus Christi.

“Working out of the Corpus Christi center, I had the opportunity to work with many different crops, but cotton is special to me,” he said. “With that being said, there is no better place than the Southern High Plains to work with cotton.”

As he makes the move to Lubbock, Maeda brings with him a growing expertise on using unmanned aerial systems, or UAS, to assist cotton research.

Maeda said the transition from AgriLife Research to AgriLife Extension will be a change in day-to-day focus as program activities shift to more traditional outreach/educational/applied research.

“But the main goals are still the same – improve agriculture, food security and farmers’ well-being; to make a difference in someone’s life, to have a long-lasting impact,” he said.

With AgriLife Research, his primary focus was UAS platforms and methodologies for high-throughput plant phenotyping and UAS-based applications for plant breeding, agricultural research and precision management applications.

Maeda earned a bachelor’s degree in biology from Centro Universitário do Triângulo, Brazil, and master’s and doctorate degrees in agronomy/crop physiology from Texas A&M. Before moving to the U.S., he worked at Netafim Brasil assisting in the development of precision irrigation systems for commercial coffee and citrus farms and with TCMA Agropecuária Ltda, assisting with large soybean, cotton, and corn commercial operations across Brazil.

In 2005, he joined Deltapine/Monsanto’s cotton breeding program as a research assistant. In this position, he served as the breeder’s assistant, designed and conducted breeding research trials across the Brazilian cotton-growing regions, managed breeding-associated field tasks, as well as research databases.

After leaving Deltapine/Monsanto in 2010, Maeda moved to College Station to pursue his master’s and doctorate degrees. While working on his degrees, he served as a graduate teaching/research assistant for the cotton physiology program and the department of soil and crop sciences.

His degrees focused on the morphological and physiological responses of cotton to drought and high-temperature stress, and at Corpus Christi, he was responsible for managing the development of a cropping systems and remote sensing program for agricultural research and crop precision management applications.

Because the South Plains is a completely different region from the Coastal Bend, Maeda said he will need to spend time adapting to the regional culture and farming practices. There will also be a need to establish new working relationships with allied industry, a regional network of county and integrated pest management agents, as well as colleagues both in and out of the Texas A&M University System.

But the South Plains cotton industry also has plenty of issues to put him to work right away.

“You name it: lack of adequate rainfall, hail storms, dwindling water supply for irrigation, pest pressure, diseases, herbicide-resistant weeds, soil fertility, off-target movement of herbicides, crop management issues, and the list goes on,” Maeda said.

“The South Plains is a challenging environment, but that also means there are opportunities to improve. Thankfully, the region is well served with some of the best people working with cotton in the nation and in the world, and by collaborating I am confident we can make a difference.”

One area he is excited to expand in that region is the UAS technology, which he said has great potential to change how agriculture research and farming will be done in the future.

“UAS provides a level of information about the crop’s responses to the environment and/or experimental treatments that we did not have access to before,” Maeda said. “I plan to continue collaborating with our colleagues at Corpus Christi and across the U.S.

“The ultimate goal for me in this new role as it relates to UAS technology is to participate in the development, validation and deployment of UAS-based tools for crop monitoring and management that will improve our farmers’ efficiency and overall farm sustainability.”

As UAS-based educational tools are developed, those will be a great addition to AgriLife Extension’s outreach efforts, he said.
More than 95 people gathered at the Hilton Garden Inn, College Station, in early October for the 39th annual Surface Mine Reclamation Workshop. Modern mining processes are much more environmentally aware than in the past. Since 1977 when Congress passed the Surface Mining Control and Reclamation Act, restoring mining land and returning it to beneficial use has been an important part of the process.

This workshop brings together researchers, government agencies and industry stakeholders to discuss current research, reclamation efforts and management techniques appropriate for Texas mines.

Dr. Vanessa Corriher-Olson, Associate Professor in Soil and Crop Sciences and AgriLife Extension forage specialist, was one of this year’s featured speakers. She discussed some options for re-establishing forages on the reclaimed lands.

“Forage selection is site specific and will be determined by the location of the mine and the soil type present there,” Olson said. “To establish forage properly you must start with a soil test.”

The soil test will not only help to determine which type of forages to plant, but will also indicate whether any soil amendments must be made at that time, she said.

Another factor to consider in selecting forage is the planned land use.

“Coastal or Tifton bermudagrasses are good for grazing or hay production. Bahia grass is an excellent pasture forage, but it is not recommended for hay,” Olson said. “Some people want native grasses for wildlife. While they are good for small mammals and birds, the natives don’t necessarily support deer.”

Olson stressed that weed control is a huge part of forage management.

“The best method of weed control is to focus on promoting desired forages,” Olson explained. “Prepare the soil prior to planting, fertilize appropriately and don’t overgraze. A healthy forage stand will minimize weed pressure.”

Another highlight of the workshop is the presentation of scholarships to students in related fields of study. This year’s recipients were Nick Frisbee, Lisette Aeschlimann, Makayla Faldyn and Donovan Davis Jr.

Frisbee is a junior majoring in plant and environmental soil science. He plans to make a career in environmental reclamation.

Aeschlimann is a senior majoring in plant and environmental soil science with a minor in horticulture. She currently hopes to work in the reclamation of contaminated lands.

Faldyn is a senior in environmental studies and environmental soil science. Her career plan is to work in the environmental industry either as a consultant or in the policy sector.

Davis is majoring in agriculture systems management with a minor in agronomy. He hopes to work in soil testing and consulting.
The most widely grown irrigated crop in the U.S. — turfgrass — is being threatened by annual bluegrass, and Texas A&M AgriLife is leading a project to find solutions.

Texas A&M AgriLife is joining scientists across the nation to address the threat through a project called Research and Extension to Address Herbicide-Resistance Epidemic in Annual Bluegrass in Managed Turf Systems.

A team of 16 university scientists will be involved in the four-year, $5.7 million project to limit the impact of annual bluegrass, the most troublesome weed of athletic, golf, lawn and sod turf, said Dr. Muthu Bagavathiannan, lead investigator and weed scientist with Texas A&M AgriLife Research in the Texas A&M soil and crop sciences department, College Station.

Funding is from a Specialty Crops Research Initiative Coordinated Agricultural Project grant from the U.S. Department of Agriculture-National Institute of Food and Agriculture.

Annual bluegrass, known as Poa, is the most troublesome turf weed, according to a recent Weed Science Society of America survey. This weed has grown to epidemic proportions, causing severe economic losses.

“The national-scale herbicide-resistance epidemic of annual bluegrass in managed turfgrass systems warrants critical attention by research and extension scientists,” Bagavathiannan said.

Known popularly as the “Green Industry” or the “Environmental Horticulture Industry,” turfgrass is about a $100 billion specialty crop industry in the U.S., with about 50 million acres of managed turf operations nationwide, said co-investigator Dr. Becky Grubbs, Texas A&M AgriLife Extension Service turfgrass specialist, College Station.

With high genetic diversity and rapid adaptation to climates and management, this species is found in all U.S. hardiness zones, Grubbs said. Even small infestations can quickly spread throughout a turf field. Annual bluegrass has a distinctly light green color with white flower heads, she said. Its presence is not tolerated in managed turf systems because of a severe negative impact on turf quality. It has poor tolerance to moisture and heat stress and stand density loss commonly occurs due to disease and nematode infections, severely affecting the recreational quality of the turf.

The team’s multifaceted approach will focus on understanding the current distribution of resistance, resistance mechanisms, rapid diagnostic methods, seed persistence and seedling emergence, phenological development, non-chemical management options and socio-economic considerations to adoption of best management practices, Bagavathiannan said.

“A decision-support tool will be developed to guide the selection of suitable management programs based on herbicide mode of action diversity and integration of non-chemical options,” he said. “We anticipate this tool will create awareness among the clients about the importance of diversified management and help select best management practices that fit their operations.”

According to the International Survey of Herbicide Resistant Weeds, annual bluegrass ranks third among all herbicide-resistant weed species globally, with resistance to at least nine different herbicide modes of action.

“Currently, very few effective herbicide options are available for the management of annual bluegrass in turf systems, and very few, if any, novel herbicide modes of action are in the development pipeline,” Bagavathiannan said.

“The inability to control annual bluegrass using existing economical and environmentally benign herbicides means that less favorable alternatives are having to be used to manage the problem,” he said.

Stakeholders have identified the lack of effective non-chemical tactics as a problem. In response, the project will evaluate cultural practices such as grass species and variety selection, mowing regimes — height and frequency, grass-clipping removal at mowing, as well as irrigation and nutrient management.

Fraze mowing — removing the top inch of soil along with the weed seeds — is a novel approach that will be evaluated.

Co-investigators on this project are: Dr. Shawn Askew, Virginia Tech; Dr. James Brosnan, University of Tennessee; Dr. Matt Elmore, Rutgers University; Dr. David Ervin, Portland State University; Dr. George Frisvold, University of Arizona; Dr. Travis Gannon, North Carolina State University; Dr. John Kaminski, Pennsylvania State University; Dr. Alec Kowalewski, Oregon State University; Dr. Bert McCarty, Clemson University; Dr. Patrick McCullough, University of Georgia; Dr. Jay McCurdy, University of Mississippi; Dr. Scott McElroy, Auburn University; Dr. Aaron Patton, Purdue University; and Dr. Bryan Unruh, University of Florida.

The project will directly benefit sod production farms, golf courses, athletic fields and residential turf systems in cost saving and improved profitability, Bagavathiannan said. As important, though, is it will help improve social and environmental benefits to the general public.
Several students from the Texas A&M University Department earned awards at the recent Crop Science Society of America (CSSA) and Agronomy Society of America (ASA) annual meetings in Baltimore, Maryland.

At these meetings, the students highlight their research through the poster competition or the oral presentation competition.

This year’s award winners included:

**Will Bowling** placed third in the Turfgrass Science division poster competition with his poster entitled “Long-term Management Dynamics of Sand-Capped Fairways”. Bowling is a Masters student in turfgrass science under Dr. Ben Wherley.

**Joseph Burke** took first place in the ASA Cover Crop Community oral competition. Joseph is a doctoral soil science student under Dr. Katie Lewis.

**Marie Schirmacher** placed first in the Semi Arid Dryland Cropping Systems graduate student poster competition. Marie is a master’s soil science student under Dr. Terry Gentry and Dr. Paul DeLaune.

**Dorothy Menefee** was the winner of the graduate student oral competition organized by the “Measurement and Modeling of Evapotranspiration and its Practical Applications” community at ASA. Dorothy is a doctoral student under Dr. Nithya Rajan. The title of her presentation was “Comparison of Eddy Covariance Evapotranspiration measurements to DSSAT Simulation for Dryland Corn and Cotton in East-Central Texas”.

**Promod Pokhrel** took second place in the graduate student poster competition organized by the “Organic Management Systems” community with his poster entitled “Effect of Cover Crop Residues on Soil Organic Carbon Mineralization in an Organic Soybean Production System.”

In addition, Promod placed second in the Diversity Student competition with the same poster.
Tackling global agriculture/food security issues is one of the primary goals of an advanced agriculture education. Karina Morales, a soil and crop sciences doctoral student under Dr. Michael Thompson, may have the opportunity to make a noticeable impact as she works toward her degree.

At the U.S. Borlaug Summer Institute for Global Food Security, Morales and her team, “Team Bangladesh”, had the winning proposal in the mock USAID grant funding project. This earned the students a trip to the World Food Prize and the opportunity to pursue grant funding for their project. “We chose to advance a project which is currently being done on a small scale, floating vegetable gardens which allow food production during the monsoon season, when all ag lands are under water,” Morales explained. “This is beneficial to the farmers not only for food availability, but the increased availability will help diversify their diets and promote a more healthful diet. It will also provide another income source to better livelihood of the farmer.”

Most of the team is interested in pursuing grant funding for this project, she said. “We will be working toward that goal over the next few months.”

According to Morales, most of the students participating this year were studying the hard sciences (plant breeding, soil science, food science, etc.) but there were also business students, anthropologists and others. “It was very eye opening to see the problem of food security from different perspectives and to realize it will not be just one discipline which will solve the problem,” Morales said.

She admitted that it can be easy for scientists to overlook the importance of the anthropologists and other disciplines. “But, if you don’t understand the culture of the people, it can be really difficult to convince them to adopt new technologies or varieties,” she said. “The improvements you want to help them implement may not match their values, beliefs or lifestyles.”

Two soil and crop sciences students attended the program this year. Morales and Tadesse Teferra, who is pursuing his Ph.D. in Food Science under Dr. Joseph Awika.
Reagan and Jessica Hejl are happy to announce the birth of their second child.

Elise Christine Hejl was born at 1:19 a.m. on October 24. Her big brother, Everett, is happy to have his new baby sister.

Reagan is a Research Associate at the turfgrass facility and is working on his Ph.D. in water management and hydrological science under Dr. Ben Wherley.

Leo and Aline Hoffmann welcomed their second son the morning of October 24.

Gustavo R. Hoffmann weighed 8 lbs 9 oz and was 53.3 cm long (20.9 inches). He was warmly welcomed by his brother 18-month old brother, Harry.

Leo is an Assistant Research Scientist in plant breeding working with Dr. Bill Rooney.

Congratulations to Dr. David Thompson, Fighting Texas Aggie Class of 1964, who took his degrees in Agronomy to the U.S. Department of Agriculture and then to the National Aeronautics and Space Administration (NASA).

Thompson went to work for the U.S. Department of Agriculture (USDA) Soil Conservation Survey after earning his B.S. in agronomy, and continued working there as he furthered his education at TAMU, earning his master’s and doctoral degree in agronomy and remote sensing.

Upon completion of his Ph.D. in 1975, he joined the USDA Large Area Crop Experiment in Houston, where he developed an internationally renowned method for using satellite data to detect and monitor droughts.

In 1976, Thompson joined the Earth Science Application Division at the NASA Johnson Space Center in Houston where he managed teams from government agencies, academia and industry to apply remote sensing to solve agricultural and global issues.

He also spent time in the Flight Project Engineering Office as a mission management project specialist, and at the Space Station Program Office as a science advocate for the project which later became the International Space Station Project. In that project he managed analysis of launch, landing and flight safety; flight experiments; programs in collection, study and preservation of samples such as moon rocks, meteorites and cosmic dust; and more.

Dr. David R. Thompson ’64, fourth from left, was one of five named as Outstanding Alumni by Texas A&M University College of Agriculture and Life Sciences. (Photo by Michael Kellett, Kellett Photography)
Warm-season grasses are plentiful in hay producing areas, but the rain that helped improve growing conditions following an extended period of drought is hurting their chances for more round bales, said a Texas A&M AgriLife Extension Service expert.

Dr. Vanessa Corriher-Olson, AgriLife Extension forage specialist, Overton, said late-season rains created good growing conditions for warm-season grasses over the last 60 days following months of drought that left hay supplies low around the state.

She said while grasses might be abundant in pastures and hay meadows, producers are having difficulty harvesting between rains.

Corriher-Olson said many producers are counting on a final cutting, but weather conditions have been against them as the first freezing temperatures rapidly approach. Producers would ideally make the final cutting now when the grass is green and before the first frost, which typically occurs Nov. 15 in East Texas, she said, but continuous rains over the last 60 days have allowed few opportunities for producers to harvest.

“Accessing the pastures with equipment was a problem, but even once the ground dried out enough to get in, producers had to consider if there was a window between rains where the hay could be cut, cured and baled before another rain,” she said. “It’s been difficult, and producers need the hay.”

Corriher-Olson said producing hay bales is heavily dependent on weather and there are risks associated with any decision when it comes to harvesting hay at this point in the season amid unfavorable weather conditions.

The best option is to move cattle onto the field for grazing if there is fencing and water is available.

“Livestock are much better harvesters than we are with machines,” she said. “But grazing isn’t an option for a lot of producers because many East Texas hay meadows don’t have fences or water.”

If hay is cut and remains on the ground when it rains, Corriher-Olson said it will begin to lose nutritive value due to leaching of non-structural carbohydrates. Rain can also shatter leaves off harvested forage and reduce both the crude protein and energy levels of the hay.

Harvesting hay after a frost is an option, she said. However, producers still need to be cautious of weather conditions.

“With cooler temperatures and cloudy days, curing hay can be even more challenging,” she said.

Extra forage can also be allowed to remain standing in the field for grazing, Corriher-Olson said. Maintaining some substantial Bermuda grass or Bahia grass stubble height could provide shade that could reduce volunteer ryegrass as well as other weed seed germination.

This might not provide 100 percent control, however competition can help reduce undesired plant growth, she said. Maintaining a higher stubble height can also be beneficial for the future growth of warm-season perennials. Higher stubble height means more substantial root structure to capture deeper soil moisture and nutrients.

“Cooler spring temperatures, drought, fall armyworms and late fall rains have added extra challenges for hay production, so late season utilization, whether harvesting, grazing or maintaining stubble, could impact forage production this year and next,” she said.
TAMU Department Soil and Crop Sciences responds to State Employee Charitable Campaign

Faculty and staff from the Department of Soil and Crop Sciences once again rose to the challenge to support the State Employees Charitable Campaign.

Three fundraisers held in October raised more than $879 for two local charities.

The third annual chili cook-off and a bake sale raised over $643 for the Brazos Valley Food Bank, with $480 raised by the cook-off and $154.60 from the bake sale.

Congratulations to #meangirls for their second straight victory in the chili cookoff. Second place went to Dr. Scott Nolte with Dr. Julie Howe claiming third.

The Cutest Pet Contest raised $245.03 for the Aggieland Humane Society.

2018 Harvest Celebration

Faculty, staff and students from the department gathered at the Scotts turf facility to celebrate fall and the harvest.

Games, food and fellowship were provided by sponsors and the department.

Thanks to Max Crittenden and Simplot for your sponsorship and support.

Thanks also to Dr. Scott Nolte, Dr. Ben Wherley and Dr. Larry Redmon for their sponsorships.
In Sympathy

Please keep the family of Mrs. Gloria Conrad in your thoughts and prayers as they mourn her passing November 14.

Gloria was a long time friend and supporter of our department. She will be missed.

Calendar

November

20 - Departmental Thanksgiving Lunch
22-23 - Thanksgiving Holidays
27 - Low-Impact Development Workshop, Seguin, TX Contact: Ward Ling - wling@tamu.edu
27-29 - Amarillo Farm and Ranch Show
28-29 - Texas State Support Committee, Lubbock TX

December

1-4 - Council of Science Society Presidents meeting - Washington D.C.
3 - Homeowner Septic System Maintenance Class - Bellville, TX Contact: Ward Ling - wling@tamu.edu
4 - COALS Holiday Social - AgriLife Center
4-5 - Texas Plant Protection Assn. Meeting - Bryan, TX
7 - Extension Meeting, College Station
11 - Texas Watershed Steward workshop - Jonesboro, TX Contact: Michael Kuitu - mkuitu@tamu.edu
14 - Graduation - College of Agriculture and Life Sciences - 2:00 p.m.
15 - 3 to 6 p.m. Baltensperger Christmas Open House

January 2019

6-9 - Soil Science Society of America Annual International Soils Meeting - San Diego, CA
7 - Soil & Crop Sciences Mixer at SSSA - Tom Ham’s Lighthouse, San Diego
7-9 - AgriLife Conference, College Station
8 - SCSC Department Annual Meeting and Awards, 2:00 p.m.
8-10 - Beltwide Cotton Conference, New Orleans, LA
22-24 - Statistics and Southern Landscape Short Course - Scott’s Facility, College Station
31- Feb. 5 - Southern Association of Agricultural Scientists annual meeting - Birmingham, AL

Save the Date

February 3-5 - American Society of Agronomy Southern Branch annual meeting, Birmingham, AL
February 21 - TAMU Plant Breeding Symposium, College Station
February 25 - March 1, 2019 - Turfgrass Ecology & Mgmt Short Course - College Station
April 11, 2019 - Department of Soil and Crop Sciences Awards Banquet - Hildebrand Equine Facility