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As 2018 draws to a close, we will enjoy another crop of students walking across the stage to accept diplomas. They will set out into the real world to make an impact in a variety of ways. We wish them the very best as their success is ours.

We also said good-bye to the former president George H.W. Bush. His passing is especially impactful to us due to the relationship he had with College Station and our university. Our prayers and condolences go out to the Bush family.

A special thanks to James Lukeman for his many years of leadership in the department. As he transitions to retirement over the next few days I want to especially thank him for helping to evolve our unit procedures toward implementation of new University/System procedures in the most user friendly way possible. His impact is huge in every aspect of the department.

We look forward to new leadership under Dana McMahon as she takes the reins. We wish Jim the very best as he enhances his fishing skills!

Congratulations go out to Dr. David Stelly who was named a Fellow by the American Association for the Advancement of Science. He is recognized as one of the premier cotton breeders in the country. (See page 11).

Congratulations to Dr. Clark Neely who took over as President for the Texas Plant Protection Association at the 30th annual meeting of that group. Kudos also to the graduate students and staff members who received awards at that meeting. (See page 10)

Just before Thanksgiving our department took the opportunity to celebrate and share a meal with the Entomology department. Among our many blessings, we are thankful for the people in all aspects of agriculture who are working toward global food security. It also provides a great time to reflect on the many accomplishments of the department over the year, from new grants, varieties, hires and students to the many achievements from these.

We continue to explore partnerships at the corporate level including meetings with Glen Weaver of Ardent Mills, Indigo, Bayer, BASF and Scotts. Many discussions revolve around ongoing work and the opportunity to expand it, but some include first time discussions on new arenas. This past month I have had the opportunity to meet with the Texas Wheat Board, the Amarillo Farm and Ranch Show, Cotton State Support, Plains Cotton, Texas Cotton Producers, Aflatoxin Mitigation Center of Excellence, Texas Turfgrass Association and the Council of Scientific Society Presidents—Dr. Stover was one of the presenters.

Extension faculty met last week for their fall meeting to review short term plans and new hires. We are excited to announce that Dr. Chrissie Segars will be starting as extension turf specialist in early February at Dallas, replacing Lindsey Hoffman. We wish Lindsey the best as she moves on to explore opportunities in Boston.

We are looking forward to several conferences early in the new year. The Soil Science Society of America will have their annual meeting January 6-10; The AgriLife Conference is Jan. 7 – 9; Beltwide Cotton Conference is Jan. 8-10; followed by the Blackland Income Growth Conference Jan. 15. PAG and Phenome meetings will be coming quickly as well. February includes the ASA Southern Branch meeting, the TAMU Plant Breeding Symposium and the Turfgrass Ecology & Management Short Course, and American Association for the Advancement of Science. More information on these events will come next month.

Our departmental meeting and awards presentation will take place January 8, in conjunction with the AgriLife Conference. We recognize the many conflicts but look forward to annual celebration of department achievements.

The department will be closed December 24 through January 1 for the holidays.

We wish you all the very best as you celebrate the holidays! Happy New Year!

More Information can be found at: http://soilcrop.tamu.edu/giving/
Season's Greetings

Wishing all of you a very happy holiday season.
From the
Department of Soil and Crop Sciences.

May your days be merry and bright!

David Baltensperger

Larry A. Redmon

Wayne Smith
Congratulations!

to those earning advanced degrees this month!
We wish you all Good Luck in the next phases of your lives!

Agronomy

Rui (Tabby) Liu
Tabby received her Ph.D. in Agronomy, Weed Science under the supervision of Dr. Muthu Bagavathiannan. Her dissertation was focused on weed management in rice.
Originally from Chu Zhou, China, Tabby earned her Master's degree in Developmental Biology from Nanjing Agricultural University.
She has already begun working as an Assistant Scientist in Weed Science at the Kansas State University Agricultural Research Center in Hays, Kansas.

Rahul Raman
Rahul received his Master of Science in Agronomy under the supervision of Drs. Xuejun Dong and Seth Murray. His research focused on corn and sorghum yields under different irrigation regimes.
He is originally from Ghagalpur, Bihar, India, and earned his Bachelor of Science in Agriculture from Banara Hindu University.
Rahul has begun working on his Ph.D. in Agronomy here at TAMU under Drs. Neely and Rajan, focused on wheat phenotyping and soil mapping. He hopes to work in the area of global food security upon completion of his doctorate.

Lauren Tomlin
Lauren earned her Master of Science in Agronomy under the supervision of Dr. Haly Neely.
She is from Phoenix, Arizona, and earned her Bachelor’s degree in Plant Biology from Arizona State University.
After her defense Lauren moved to Guanajuato, Mexico, with her brother, Ryan Tomlin, to study Spanish. She is now working for Miedema Produce, Inc., in Surprise, Arizona.

Carson Wade
Carson earned his Master of Science in Agronomy under the supervision of Dr. Julie Howe.
He is originally from Birmingham, Alabama, and earned his undergraduate degree in Management from Auburn University at Montgomery.
Carson is applying to veterinary school.
**Agronomy (cont)**

**Kacie Wynne**

Kacie earned her Master of Science in Agronomy under the supervision of Drs. Clark Neely and Curtis Adams.

She is from Salinas, California, and previously earned her Bachelor of Science in Plant and Environmental Soil Science from TAMU.

**Biotechnology**

**Victoria Morrison**

Victoria earned her Master of Biotechnology under the supervision of Dr. David Stelly.

A native of Troutman, North Carolina, Victoria earned her Bachelor’s degree in Biology from the U.S. Air Force Academy.

After graduation she will be stationed at Cannon Air Force Base in New Mexico where she will be the Personnel Officer assigned to the 27th Special Operations Civil Engineer Squadron. In the future she will be teaching in the Biology department at the USAF Academy in Colorado Springs.

**Soil Science**

**Christopher Dermody**

Christopher received his Master of Science in Soil Science under the supervision of Dr. Paul Schwab.

He had previously received his Bachelor of Science in Agronomy from TAMU.

Chris has accepted a position with the Texas Commission on Environmental Quality.

**Bidemi Fashina**

Bidemi earned his Master of Science in Soil Science under the supervision of Drs. Youjun Deng and Anil Somenahally.

Bidemi received his Bachelor of Science in Soil Science from the Obafemi Awolowo University in his native Nigeria.

He plans to remain at Texas A&M to pursue a Ph.D. under the supervision of Dr. Youjun Deng.

**Abdurrahman Masrahi**

Abdurrahman received his Ph.D. in Soil Science under the supervision of Drs. Terry Gentry and Anil Somenahally.

He is a native of Saudi Arabia, where he earned his undergraduate degree. He earned his Master of Science in Plant and Environmental Soil Sciences from Clemson University.

Abdurrahman will be returning to his lecturer faculty position in the Biology department at Jazan University, Jazan City, Saudi Arabia, where he anticipates being promoted to assistant professor.
John Cason
John received his Ph.D. in Plant Breeding in the distance education program under the supervision of Drs. Charles Simpson and Bill Rooney.
Originally from Abiline, he earned his Master of Agriculture from Tarleton State University with his research focused on root-knot nematode resistance in peanut.
John is currently employed by the Texas A&M AgriLife Research and Extension Center in Stephenville, where he will continue to assume a more active role as a peanut breeder within the AgriLife peanut program.

Smit Dhakal
Smit received his Ph.D. in Plant Breeding under the supervision of Drs. Shuyu Liu and Amir Ibrahim.
Originally from Chitwan, Nepal, Smit earned his Master of Science in Wheat Breeding and Genetics from West Texas A&M University.
Smit has accepted a Post-doc position at the University of Illinois at Urbana Champaign and will begin there in January.

Kotilingam Konda
Koti received his Ph.D. in Plant Breeding in the distance education program under the supervision of Drs. Amir Ibrahim and Yog Raj, his distance advisor.
Originally from Hyderabad, India, Koti now lives in Saskatoon, Canada.
He will continue working for BASF as a Discovery Breeder in the oilseed division.

Nicholas Ace Pugh
Ace received his Ph.D. in Plant Breeding under the supervision of Dr. Bill Rooney.
He is from Oklahoma City, Oklahoma, and earned his Bachelor of Science in Biology from the University of Central Oklahoma. He earned his Master of Science in Plant Breeding from TAMU in 2015.
Ace has accepted a Post-doc position at the University of Arizona in Tucson, Arizona.

Hussam Alawadi
Hassam received his Ph.D. in Plant Breeding under the supervision of Drs. Rodante Tabien and Amir Ibrahim.
He is from originally from Al-Qadisiyah, Iraq.
After graduation Hassam will return to Iraq to teach in the Agriculture College of the University of Al-Qadisiya. He hopes to return to in the future for a Post-doc position.
Mitchell Schumann
Mitchell earned his Ph.D. in Plant Breeding under the supervision of Dr. C.Wayne Smith.
Originally from Raleigh, North Carolina, Mitchell earned his Master of Science in Plant Breeding from North Carolina State University in 2015.
He has accepted a position in Monsanto's corn breeding program, and will be based out of St. Louis, Missouri.

Sonia Ehivet
Sonia earned her Master of Science in MEPS under the supervision of Dr. Sakiko Okumoto. Her research focus was the development of biosensors.
Originally from Abidjan, Côte d'Ivoire, Sonia earned her Bachelor of Science in Biology from Tuskegee University.
Sonia is looking forward to entering the workforce and is exploring job opportunities in her area of study.

Alejandra Torres-Marrero
Alejandra earned her Master of Science in MEPS under the supervision of Dr. Luis Cisneros.
She is originally from Coamo, Puerto Rico.
Alejandra will be enrolled in pharmacy school after graduation.

Lukeman Retires from SCSC business office
Jim Lukeman ’95 is retiring after 23 years of service to Texas A&M University.
He has been the Business Administrator for the Department of Soil and Crop Sciences for ten years.
His duties included overseeing the budgets, managing accounts, and supervising 14 employees in the business office, communications office and throughout the department.
Jim earned his Bachelor of Science in Management from TAMU in 1996, after spending five years in the United States Air Force.
As a student he worked for the Memorial Student Center. After earning his degree he spent nearly ten years in the Student Programs Office before joining Soil and Crop Sciences.
Jim is looking forward to fishing, spending time with family, fishing, hunting, and fishing.
He plans to do some traveling and to spend time teaching his grandchildren skills that computers and technology cannot.
His retirement begins at the end of the year, and he is currently training his successor, Dana McMahon. (see story page 9)
Matthew Luis Davila  
PSSC - Crops emphasis  

Jennifer Lynn Dudak  
PSSC - Crops emphasis  

John Michael Grunseich  
Double major PSSC - Crops and Entomology  

Kyle Michael Haverland  
Double major PSSC - Crops and Agriculture Communications Minor in Agronomy  

Ya Nan Lin  
PSSC - Crops emphasis  
Minor in Business  

Brett Thomas Martin  
Turfgrass Science  

Matthew Scott Peterman  
Turfgrass Science  

Audrey Rose Raabe  
PSSC - Soil and Water emphasis  

Joe Roel Rivera  
PSSC - Soil and Water emphasis  

Garrett Scott Taylor  
PSSC - Crops  

Alyssa Kay Updegrove  
PSSC - Crops emphasis  

Jacob Carrell Wilkerson  
PSSC - Crops emphasis  

Jordan Elizabeth Zerr  
PSSC - Crops emphasis  

Emily Lauren Blue  
Major - Ag Sciences  
Minor - Agronomy  

Aaron Scott Gee  
Major - University Studies - Ag Leadership option  
Minor - Sports Management Minor - Agronomy  

Hannah Grace Horne  
Major - Communications Minor - Agronomy  

Zachary Donovan Hutchison  
Major - Agriculture Leadership Minor - Agronomy  

Carl Sawyer Jenkins  
Major - Ag Business Minor - Agronomy  

Allison Elizabeth Lazear  
Major - Bioenvironmental Science Minor - Agronomy  

Johnathan Paul Mcanulty  
Major - Agriculture Leadership Minor - Agronomy  

William Wyatt Scherer  
Major - Agriculture Leadership Minor - Agronomy Minor - Agriculture Economics  

Cooper Johnson Stence  
Major - Agriculture Systems Mgmt Minor - Environmental Soil Science  

*PSSC - Plant and Environmental Soil Science
Dr. Reagan Noland has joined the soil and crop sciences department as the AgriLife Extension agronomist specializing in crop management at the Texas A&M AgriLife Research and Extension Center in San Angelo.

It’s a homecoming of sorts for Noland, who grew up in the San Angelo area helping his grandparents with farm and ranch production.

“I am excited to be back here, and I look forward to serving the agricultural community and working to improve the resilience and profitability of our systems,” Noland said. “Agriculture plays a vital role in the economy of this region, and maintaining long-term productivity relies on an integrated approach to crop, soil, and water management, particularly in our often-dry climate. I hope my experience in this area will benefit producers in West Central Texas.”

Noland said he is eager to begin developing programming designed to help producers in cotton, wheat, corn and grain sorghum, as well as annual and perennial forages.

“There is great potential for diverse and integrated production in this region. Many farm operations also manage livestock or have access to regional feed and hay markets,” he said. “I look forward to developing educational programming that covers a broad range of cropping systems management and identifies opportunities to improve production.”

Noland was previously the grain crops extension specialist at the University of Georgia. He has a bachelor’s degree in natural resource management from Angelo State University, a master’s degree in agronomy from Texas A&M University and a doctorate in agronomy and agroecology from the University of Minnesota.

Noland is a member of the American Society of Agronomy and the Crop Science Society of America.

By: Blair Fannin

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McMahon joins as new Business Administrator

As we prepare to begin a new year, we will be welcoming a new business administrator to the department.

Dana McMahon will be replacing Jim Lukeman, who is retiring at the end of the year. (See related article page?)

Dana comes to us from the College of Veterinary Medicine, where she has worked for the past sixteen years.

“I began working in the Dean’s office at the vet school when I was an undergraduate studying rangeland ecology and management, assisting his administrative assistant,” McMahon said.

After earning her bachelor’s degree she was hired as a full-time employee in the business office, beginning as a courier and reallocating credit cards.

She immediately fell in love with the work and the position, and knew she had found her career path.

She worked her way up the ladder at the CVM and now brings those same talents to the Department of Soil and Crop Sciences.

She is interested to learn the Extension side of the job, since CVM does not have an Extension presence.

She is not completely new to Extension, though.

“My grandfather was a cotton farmer and I grew up within walking distance to the cotton gin, so this is not an entirely new experience for me,” McMahon said.

She grew up in East Bernard, TX, a small community about 95 miles due south of College Station.

Like many rural kids, she was active in 4-H and FFA, showing pigs and a heifer.

McMahon and her husband, Steve, have been married ten years and have two children.
Dr. Clark Neely, Soil and Crop Sciences Assistant Professor and AgriLife Extension small grains and oilseed specialist, was named as the new president of the Texas Plant Protection Association at their 30th annual conference December 5.

Dr. Clark Neely is the new president of the Texas Plant Protection Association. (TAMU Soil and Crop Sciences photo by: Beth Ann Luedeker)

Neely joined the department as a graduate research assistant in 2010 after earning his Master of Science in Plant Science from the University of Idaho. He received his B.S. in Agriculture Extension and Education with minors in Agronomy and Animal Science from The Pennsylvania State University.

He has been in his current role since 2013.

As the state extension specialist for small grains and oilseed crops, Neely works with producers, industry and faculty across the state of Texas, to promote environmentally and economically sound agronomic practices.

He coordinates the statewide Uniform Variety Trials for wheat, conducting research on water use efficiency, yield improvements and sustainable practices which will best meet the global food demands and provide a profitable income stream for producers, while being environmentally sustainable.

Neely accepted the gavel from outgoing president Dr. Kranthi Mandadi.

Soil and Crop Sciences Master’s student Colby Scott Ratcliff was recognized as the TPPA Outstanding Graduate Student for 2018.

This award is given to a graduate student in the College of Agriculture and Life Sciences at TAMU who enters a poster or paper at the annual meeting, has record of excellence in the graduate program and has made a significant contribution to Texas production agriculture.

Colby Ratcliff received the Outstanding Graduate Student Award for 2018 from TPPA. Pictured are past president Kranthi Mandadi, Ratcliff, and association board chairman Ray Smith. (TAMU Soil and Crop Sciences photo by: Beth Ann Luedeker)

Ratcliff, who is working under the supervision of Dr. Seth Murray, earned his B.S. in Agriculture Economics at Texas A&M in 2016. At that time he had not considered graduate school.

“I started working for Dr. Murray as an undergraduate student worker,” Ratcliff said. “As I was nearing the end of my undergraduate career, we were in the middle of a corn field and began discussing grad school. Dr. Murray offered me a spot in his breeding program, and began working on my Master’s in Agronomy right after graduating in December of 2016.”

He has played a large role in the planting, agronomics and data collection of the Genomes to Fields collaborative project in College Station and has shown great leadership in the Maize Breeding and Quantitative Genetics program, Dr. Murray said in his nomination of Ratcliff.

Ratcliff has accepted a position with J.R. Simplot Grower Solutions as a Crop Advisor-Technical Services Representative in College Station. He will complete his research work this spring (while employed) and receive his Master’s in May, 2019.

In the TPPA Ph.D. student poster contest, James Griffin, a Plant Breeding student under Dr. Gaylon Morgan, claimed first place. His poster highlights research on the efficacy of cotton recovery sprays on injury caused by dicamba and 2,4 D.

In the Plant Identification contest, Dale Mott, AgriLife Extension program specialist under Dr. Gaylon Morgan, placed third.

Ph.D. poster contest winner, James Griffin, center with past president Kranthi Mandadi and Pete Eure, poster chairman. (TAMU Soil and Crop Sciences photo by Beth Ann Luedeker)
Dr. David Stelly has been named a Fellow of the American Association for the Advancement of Science or AAAS.

Stelly, a professor of cytogenetics, genetics, genomics and plant breeding in the soil and crop sciences department, holds a joint appointment with Texas A&M AgriLife Research and Texas A&M University in College Station.

Election as an AAAS Fellow is an honor bestowed upon AAAS members by their peers, according to the association. This year 416 members have been awarded this honor because of their scientifically or socially distinguished efforts to advance science or its applications.

Stelly and other new Fellows will be presented with an official certificate and a gold and blue rosette pin, whose colors represent science and engineering, respectively on Feb. 16 at the 2019 AAAS annual meeting in Washington, D.C.

AAAS is the world’s largest general scientific society and publisher of the journal, Science, as well as Science Translational Medicine, Science Signaling, Science Advances, Science Immunology and Science Robotics.

As part of the Agriculture, Food and Renewable Resources Section, Stelly was selected as a Fellow “for instilling the thirst for knowledge of plant breeding, genetics, cytogenetics, and molecular methods to students and colleagues in cotton, sorghum, soybean and potato,” according to the association.

Stelly has more than 40 years of diverse breeding experiences with diploid and polyploid crops such as potato, tomato, soybean, maize, conifers, sorghum and cotton, including researching germplasm introgression, reproductive biology and cytology, cytogenetics, genetics and genomics.

He joined Texas A&M in 1983, and for the past 35 years, he has led a multi-faceted research program that focuses on increasing the ability to use wild genetic resources for improvement of cotton.

He is known internationally for his research efforts that integrate the fields of plant breeding, diploid and polyploid cotton cytogenetics, genetics, mapping, diversity analysis, evolution, wide-cross germplasm introgression, reproductive biology, cytology, cytogenomics and bioinformatics.

Stelly earned his bachelor’s degree in genetics from the University of Wisconsin, his master’s degree in plant breeding and cytogenetics from Iowa State University, and his doctorate in plant breeding and plant genetics at the University of Wisconsin.

He has been recognized with many honors over the years, including being named the Cotton Researcher of the Year by the International Cotton Advisory Committee in 2017. He received the Lifetime Achievement Award at the National Conference on Genetics and Cytogenetics at the University of Agricultural Sciences, Dharwad in Karnataka, India, and was named a Fellow by the Crop Science Society of America, both in 2016.

For more information about Stelly’s research or to contact him, go to http://soilcrop.tamu.edu/people/stelly-david-m/.

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**Dr. Frank Hons named Professor Emeritus**

Dr. Frank Hons, who officially retired from the department earlier this year, was named Professor Emeritus for the Department of Soil and Crop Sciences.

At the department’s Thanksgiving lunch, Dr. David Baltensperger (right) presented Hons with certificate from the Texas A&M University Board of Regents.

*Congratulations, Dr. Hons!*
Texas peanut production down 43 percent from 2017

By: Adam Russell

Fewer planted acres, summer drought and late-season rains caused a significant drop in peanut production around the state, according to a Texas A&M AgriLife Extension Service expert.

Dr. Emi Kimura, AgriLife Extension statewide peanut specialist, Vernon, said planted peanut acres dropped to 155,000 acres from 275,000 acres in 2017, a 43 percent reduction.

Planting was delayed due to hot, dry conditions, and heat stress contributed to lower production levels throughout much of the growing season, Kimura said.

Continuous rains started in September and delayed harvest, she said. Rain and excessively wet conditions on peanuts and in windrows has reduced harvest efficiency and created quality issues.

Integrity of pegs weakens in the wet conditions, which increases harvest losses, she said. Also, wet peanut vines are not harvested easily.

“It was very dry early and has been very wet late,” she said. “The rains came too late to really help the plants produce peanuts. Irrigation was limited, and peanuts are a high water-use plant, so that contributed to below-average production. Wet conditions have also hampered harvests and reduced yields and quality.”

Kimura said U.S. Department of Agriculture forecasts estimated per-acre yields for Texas would be 6 percent lower, or 3,100 pounds per acre, compared to 3,300 pounds per acre for average years.

Harvest was 50-55 percent complete before the Thanksgiving holiday, Kimura said, but producers took advantage of dry, sunny conditions and should now be 70-75 percent complete.

“Harvesting has been really difficult for producers in the 2018 season with limited harvest windows between wet conditions and freezing weather,” she said.

Producers faced typical disease pressure including pod rot, she said. Potential disease problems may be found among in-shell market-types, such as Virginias, if they are in windrows under excessively wet conditions. Prolonged wet conditions in the windrow may change the brightness of the hull.

“I’ve not heard of any excessive disease issues from producers,” she said. “Producers faced several challenges this year, but disease pressure was typical.”

Kimura said data from AgriLife Extension peanut variety trials around the state were beginning to come in. She said the data is available to producers seeking varieties that perform well and are drought, disease and pest tolerant. More information can be found at http://varietytesting.tamu.edu/peanuts/.

Ardent Mills visits

Glen Weaver of Ardent Mills (third from left) visited with Texas A&M University Soil and Crop Sciences faculty recently.

The discussions centered around potential long term collaborations in wheat quality improvement.
Coffee researchers, roasters and others with an interest in coffee gathered at the Scotts turfgrass facility on the Texas A&M University campus to discuss opportunities for coffee research.

“Coffee is not one of our top crops, but millions of pounds are roasted and consumed in Texas each year,” said Dr. Leo Lombardini, Horticulture Professor and Director of the Texas A&M Coffee Center. “In the Houston area alone, there are about 100 small roasters and 15 large roasters.”

“Coffee grounds are a large waste issue. Thousands of tons of used grounds are sent to landfills annually,” said Amanda Birnbaum, a doctoral student in Horticultural Sciences.

Companies like GeoJava, a cold-brew coffee company, are working with researchers to find ways the spent grounds can be of beneficial use.

Soil and Crop Sciences Associate Professor Ben Wherley is one such of the researchers. He had his team have joined forces with GeoJava to research possible uses for spent grounds in turfgrass systems.

“Most sports fields are sand based, so spent coffee grounds can be used as a root zone amendment,” Wherley told the participants at the symposium. “We are seeing a layer of spent coffee grounds forming in thatch, and expect to see them contributing to increased water holding capacity in the future.”

Greenhouse tests indicate that the spent grounds help retain moisture, and they are now testing that in the research plots in College Station, he said.

Wherley said he has also had some success using grounds as a preemergent herbicide.

“We are just scratching the surface of research,” he said. “Do we need to compost the grounds first? Do fresh grounds work better? How effective will they be as a pre-emergent? Those are questions we want to answer.”

During the conference researchers are also discussed their work on the sensory aspect of coffee, the constraints for smallholder coffee farmers, improving coffee quality through soil health remediation, and more.
New Chemistries tested for weed control in corn

By: Kay Ledbetter

While producers may find newer corn herbicides on the market, it is important to look herbicide performance under regional environmental conditions before making any large purchases, said a Texas A&M AgriLife Extension Service specialist.

There are many good herbicides on the market, but producers often find that some herbicides perform poorly under stressful Texas High Plains conditions, said Dr. Jourdan Bell, AgriLife Extension agronomist in Amarillo.

Bell said there were many good tank-mix options providing very good control, based on results from this year’s corn herbicide trials near Bushland. However, she reminded producers that coverage is a key component. For corn herbicides, treatments were applied at a rate of 15 gallons per acre.

“In our corn herbicide trials at Bushland, application volume in addition to proper herbicide selection was the key to success,” she said. “If we dropped the label guidelines of 15 gallons per acre; we often dropped success.”

The herbicide resistance seen across the High Plains states in both kochia and pigweed is, in part, due to less than maximum coverage over the years that left behind some weeds that built up the resistance, Bell said.

Another important consideration is the activation requirement of soil-applied herbicides, Bell said. Some chemicals need to be activated with a half-inch rain or irrigation while other herbicides may need up to 1 inch of rain or irrigation; the exact amount of water needed is a function of the herbicide’s water solubility.

“While this is not a problem on irrigated acres, this can be a problem under limited irrigation and on dryland acres if precipitation is not received in a timely manner,” she said.

Palmer amaranth, tumble pigweed, kochia and Russian thistle are some of the weeds evaluated in the study, where multiple products with multiple modes of action are being tested, Bell said.

“Herbicides can be extremely expensive, so it is important that AgriLife Extension has the opportunity to evaluate newer herbicides under our environmental conditions and then be able to share that data with you,” she said.

While herbicides can be a significant production expense, it is important for producers to recognize the economic return on their herbicide investment, Bell said.

“Producers continually hear that weeds are using water and nutrients,” she said. “In our corn herbicide trials, we have evaluated yields between different treatments. We’ve seen up to an 80-bushel-per-acre difference between a plot with well-controlled weeds and an untreated control plot due to the resources being wasted by weeds. That is significant, especially at lower corn prices and in a limited water environment.”

There’s not just one solution for a successful herbicide program in the High Plains, Bell said.

“A successful program generally includes herbicides with residual activities in addition to post-emergence herbicides with several modes of action,” she said. “Having several modes of action along with good coverage allows producers to be more proactive against herbicide-resistant and hard-to-control weeds.”

The entire list of products tested, control levels and rotational intervals can be found at https://tinyurl.com/cornherbicides.
Congratulations to Nathalia Penna Cruzato for her third place video in the American Seed Trade Association “Better Seed Better Life” student video contest. This year’s theme was “Rumor Has It”. Video entries were to address common misconceptions about the seed industry and/or plant sciences. Nathalia’s video “What do you know about food?” seeks to determine if people’s knowledge is scientifically proven or myth. Her video is posted on YouTube and can be viewed at: https://www.youtube.com/watch?v=Pr1n-b9FUik&feature=youtu.be

Nathalia is a doctoral student in plant breeding under the supervision of Dr. Seth Murray.

Prior to coming to TAMU she had earned her Master of Science in Agricultural Engineering from Agrocampus Ouest, in France.

Students participate in research Down Under

By: Beth Ann Luedeker

Educators know that hands-on experience is a critical part of learning, and Texas A&M University offers many opportunities for students to study abroad, conduct research and participate in internships.

This past summer two doctoral students under the supervision of Dr. Cristine Morgan had the opportunity to do all that in Australia.

Dianna Bagnall, a soil science major, and Cody Bagnall, a biological and agricultural engineering student, participated in the “Australia-Americas Ph.D. Internship”, a program run through the Australian Academy of Science.

During the program, about 40 Ph.D. students from the sciences and engineering spend nine weeks conducting research with a mentor from the Academy.

“We were fortunate that Dr. Morgan already had collaborations with Dr. Alex McBratney at the University of Sydney,” Dianna said. “He was the one who made us aware of the program and invited us to participate.”

Dianna worked with McBratney during the program, continuing some research she had already begun dealing with 3-D scanning of soil structure.

“I had a collected soil scanning data here in the U.S. in the spring and we did the data analysis there, to better understand the data we had collected,” she said.

Dianna and McBratney also took soil scans in Australia for comparison. The soil scanner was then donated to the University of Sydney.

She is working on a preliminary paper she hopes to publish soon.

Cody was working with Dr. Ian Young, an environmental biophysicist, looking at root-soil interaction.

He was there to learn the techniques those scientists are using for root imaging and image processing.

“My research for my Ph.D. is focused on root imaging using low-field MRI. Once you get the images, how you process them and how you analyze them is fairly similar, so this summer was very useful for me,” Cody said.

The Bagnalls also had some time to explore the area near Sydney and to talk to local farmers.
Calendar

December
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
18 - Soil and Crop Holiday Coffee and Jim Lukeman retirement 2:30 p.m.
24 -January 1 - Department offices closed for the holidays

January
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
7-10 - AgriLife Conference, College Station
8 - SCSC Department Annual Meeting and Awards, 2:00 p.m.
8-10 - Beltwide Cotton Conference, New Orleans, LA
12-16 - Plant and Animal Genome Conference, San Diego, CA
18 - Dr. Josh Cobb, IRRI, seminar for Plant Breeding Circle
22-24 - Statistics and Southern Landscape Short Course - Scott’s Facility, College Station
23-24 - Red River Crops Conference, Childress, TX
23-26 - National Agriculture Research, Extension, Education and Economics meeting

February
3-5 - American Society of Agronomy Southern Branch annual meeting, Birmingham, AL
6-9 - Phenome 2019, Tucson, AZ
7-8 - Soil Survey & Land Resource Workshop, College Station
11-13 - Society for Range Management meeting
14-17 - American Association for the Advancement of Science, Washington D.C.
21 - TAMU Plant Breeding Symposium, College Station
25 - March 1, 2019 - Turfgrass Ecology & Mgmt Short Course - College Station

Save the Date
March 3-6 - Texas Seed Trade, Austin TX
April 11, 2019 - Department of Soil and Crop Sciences Awards Banquet - Hildebrand Equine Facility