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Texas A&M University Department of Soil & Crop Sciences TAMU 2474, College Station, TX 77843 Ph. 979.845.3041
Congratulations to our May graduates. It is always special to celebrate the transition that graduation provides. The demand for our graduates remains strong at the BS, MS and PhD levels. We look for this group to continue the outstanding leadership that our department is known for. A special thanks to the families and loved ones that supported their time in our department.

This past week we celebrated the grand opening of the new Scotts Miracle-Gro facility (see story and pictures inside.) This culminates a decade effort to enhance our Turfgrass research, teaching and extension activities. A special thanks to Dr. Richard White for his patience and leadership in moving this project to completion.

The state hiring freeze is impacting our ability to prepare for the fall with the transition of several faculty to retirement or other positions. We currently have five vacant positions in our extension team as we approach the intensive part of the crop production season in Texas. We greatly appreciate the efforts of the whole department pulling together to cover the gaps, but hope that the freeze ends soon.

This past weekend I had the opportunity to participate in a meeting with the presidents of seven science societies in Washington, D.C., to discuss and hear about new science programs that have the potential to transform our lives. We heard about new methylation technologies that may impact our ability to treat Parkinson’s and have potential application for crop and livestock improvements as well. We saw advances in data prediction models which could play a role model in reducing animal testing for safety of new products and better guide our assessment of environmental risks. Dr. Seth Murray, on sabbatical in D.C., provided insight to the leadership Texas A&M is providing in UAV (drone) applications to agriculture research and production.

We have had the opportunity over the past month to approach the wrap-up of our annual evaluation process and are moving forward with mid-term evaluations of our assistant professors. It is an exciting time as this provides the opportunity to document the many accomplishments of our staff and faculty. Thanks to the entire department for the commitment to serve our many groups of clientele.

The field day season is off and running for the year with our wheat field days moving north across the state as the crop matures and the Bennet Trust meeting in Kerrville. These events provide a great opportunity to share our research and interact with producers on problems that still require additional research.

A special shout out to Dr. Mark Hussey, recently recognized by the former students association for outstanding administration. Congratulations as well to Dr. David Stelly on his recent recognition by the International Cotton Advisory Committee.

Thanks to our faculty for participating in the interviews for our new provost and serving on the search committee for our Dean and Vice-Chancellor. While transition and change are frequently scary, they also provide the opportunity to make adjustments to meet the future needs. I am confident that with our great group of faculty, staff and students that our future is bright.

Be safe as our summer field activities bring on long days and significant travel.
The ScottsMiracle-Gro Facility for Lawn and Garden Research, located at 3100 F&B Road in College Station, officially opened May 3.

The new facility is part of a long-term agreement among ScottsMiracle-Gro, Texas A&M AgriLife and the Texas A&M College of Agriculture and Life Sciences.

“The partnership with ScottsMiracle-Gro greatly increases our capacity to conduct research and educational programs that will benefit our students, the turfgrass industry, turfgrass professionals and the environment,” said Dr. Richard White, Texas A&M turfgrass management scientist, College Station.

White said while bricks and mortar may not make a program, they do make it more efficient and help serve the mission of the department, college, agency and university. The facility will allow more effective and efficient research efforts in the area of water quality, sustainable turf systems, shade tolerance, drought resistance and conservation.

“Partnerships like this one with ScottsMiracle-Gro are helping students across the Texas A&M University System in a variety of ways by providing access to practical applications and by helping to make sure we can focus more public dollars on education,” Chancellor John Sharp said. “We hope we can find other forward-thinking companies to further improve our system.”

Dave Swihart, ScottsMiracle-Gro senior vice president of research and development in Ohio, said over the last several years, Scotts committed to enhance their research through Texas A&M by funding two students and supporting two associates to participate in the Texas AgriLife Lifetime Leadership program. They also worked with Texas A&M AgriLife on the research and technical refinement of products such as the Scotts EZ Patch Lawn Repair for St. Augustine grass.

Scotts has also worked with researchers on numerous experiments and trials for fire ant control technologies, enhanced genetics and variety development of St. Augustine grass, Swihart said. Additionally, they have done a significant amount of work with turfgrass fertility and weed herbicide research of southern weeds and lawns.

“In all, we’ve had more than $1 million invested with the Texas A&M AgriLife turfgrass program here,” he said.

“Our partnership with Texas A&M AgriLife has been (a) strong success for both parties involved,” Swihart said. “In the future we will continue to invest in research with AgriLife with a focus on the efficacy and performance of products for Texas.”

This journey started about 15 years ago with a shared vision on how to use the space, White said. This research facility significantly improves Texas A&M’s ability to address a wide range of issues and challenges in the turfgrass industry.

He said it would allow the continuation and improvement of high impact learning for undergraduate students with the ability to carry out programs in close proximity to outdoor labs.

“Ultimately, our goal is to create new information to make lawns and landscapes more sustainable,” White said. “With this new facility, we will be able to be more effective and efficient in extending our programs and research to turfgrass practitioners and Texas citizens.”
Landowners gathered at the Y.O. Ranch Hotel and Conference Center in Kerrville April 20-21 for the fourth annual Land Stewardship Conference sponsored by the Bennett Trust and Texas A&M AgriLife Extension.

The two day conference focuses predominantly on stewardship in the Edwards Plateau, addressing livestock and wildlife management options, brush control, soil and water management and much more. This year also included presentations regarding rainwater harvesting and agriculture law.

World-renowned rain harvester Dr. Billy Kniffen, a retired AgriLife Extension water resource associate from Menard, discussed the possibilities for harvesting and using rainwater. In the hill country, captured water can be an excellent option for those who want irrigation for flowerbeds, a water source for wildlife and livestock.

According to Kniffen, a one-inch rain will produce 6/10 of a gallon of collectable water. Using his own home as an example, he explained that the 5,000 square foot of roof surface could catch 3,000 gallons of water from a one inch rain. Collecting that water instead of allowing it to run off the roof prolongs the availability of those infrequent hill country rains, and increasing the amount of water that has the opportunity to benefit the land.

Tiffany Dowell Lashmet, an AgriLife Extension agriculture law specialist, discussed ten laws that Texas landowners need to know. With humor and energy she covered topics including water rights, and mineral rights.

Participants at the conference included owners of a variety of operations, with a variety of needs and expectations.

“I believe that to be good stewards of the land you need to continue your education, which for me means coming to these AgriLife seminars,” said Lori Duncan. She and her family own ranches in the hill country which they are always working to improve.

Another participant admitted that he attended the conference to get some of the required credits to maintain his private applicator license, but came away with good information on how to prevent some of the invaders on his property.

“The more I learn about how to prevent any type of predator or invader, any plant or animal species we don’t want, the more beneficial it is to the species we do want,” he said.

In addition to the information presented at the conference, participants also receive a flash drive containing numerous articles and resources pertaining to the topics discussed. They also have the opportunity to talk to the specialists about their specific needs.

The second day of the conference is spent on touring traditional and non-traditional agriculture operations. Participants could select the Kerr wildlife tour; a tour of the Hillingdon Ranch, which has been operated by the same family since the 1800s, or a tour of Hill Country wineries.

This event, held each April, is open to both men and women. In October there will be another conference sponsored by the Bennett Trust which is geared specifically for women landowners. That conference will be held in Fredericksburg. For more information about either conference, contact Dr. Larry Redmon at l-redmon@tamu.edu.
Dr. Scott Finlayson, AgriLife Research molecular physiologist in the Texas A&M University soil and crop science department at College Station, has been studying branching of plants for several years.

Shoot branches in plants are produced from buds present where the leaf meets the stem, Finlayson said. The growth of these buds is regulated by chemicals known as phytohormones, which are produced by the plant and have similarities to hormones found in animals.

The most intensely studied phytohormone is auxin, even as far back as the 1800s, he said. Many scientists believe auxin is the most important factor controlling branching.

However, Finlayson and former student Dr. Srinidhi Holalu, now a post-doctorate research associate at the University of California-Berkeley, recently discovered there is more than one hormone affecting the branching process.

Their work was recently published and spotlighted in the Journal of Experimental Botany as breaking new ground. To view go to http://bit.ly/2orKS2j.

The paper, titled “The ratio of red light to far red light alters Arabidopsis axillary bud growth and abscisic acid signaling before stem auxin changes,” received attention as being at the forefront of putting the new hormone into the branching picture, he said.

“Our lab and others have recently shown that another phytohormone called abscisic acid, or ABA as it is known, also plays an important role,” Finlayson said. ABA was identified in the 1960s and it was suggested then it might play a role in branching, but the ability to test it genetically was not available, he said. ABA is known more for its role in regulating water movement through the plant.

“We found the genetic tools to show it is also a regulator of branching and were the first to report on it,” Finlayson said.

Branching is an important plant feature, he explained, and is controlled by light signals modified by neighboring plants. If the branches are inhibited, the stem will grow taller. The plant invests in the main shoot rather than in branching, to get to more direct light.

“Branching is an important plant feature, and is controlled by light signals modified by neighboring plants. If the branches are inhibited, the stem will grow taller. The plant invests in the main shoot rather than in branching, to get to more direct light.”

ABA, an inhibitor, is one of the earliest regulators of branching. Auxin regulates from the stem, but ABA is present in the bud and is probably responding more directly to light signals it is receiving, Holalu explained. “We investigated how auxin and ABA control whether buds form branches when given light signals that mimic crowded and uncrowded conditions,” he said. “We found bud growth is altered very quickly, within six hours, when light signals are changed. We also found these changes in bud growth were more closely related to changes in ABA than auxin.”

ABA, an inhibitor, is one of the earliest regulators of branching. Auxin regulates from the stem, but ABA is present in the bud and is probably responding more directly to light signals it is receiving, Holalu said.

“In our case, we used red to far red light signals to trick the plants to think they were in a crowded environment, and then crowding was reduced to start the branch growth again,” he said.

The ABA levels and signaling were altered before bud growth changed, Holalu explained. Auxin levels and signaling, on the other hand, were only slightly affected later. Other experiments showed while auxin is a strong regulator of branching, it takes about a day for its effects to become apparent.

Finlayson said ABA seems to be involved very early and acts directly in the bud itself, while auxin has a stronger effect but acts much later in the stem.

“Both of these phytohormones, and others, are needed for appropriate branching to occur,” he said.
In early April, Dr. Muthu Bagavathiannan’s weed identification team took a tour of the Langford Building’s green roof to assist in identifying the weeds infiltrating the installation. Langford is home to the TAMU College of Architecture’s School of Landscape Architecture and Urban Planning, and the roof installation is led by LAUP faculty members that include Bruce Dvorak and Jeremy Merrill.

Green roofs have been used to help mitigate storm water and reduce heat island effects in urban environments. However, the purpose of green roofs may be expanded to include positive design elements for environmental health, or even serve as a small but important niche in urban agriculture. Dvorak and Merrill are working with Soil and Crop Sciences faculty member Jake Mowrer to include the production of vegetables in the green roof setting. It was Dr. Mowrer’s invitation that brought the Weed ID Team to the roof for this cross-campus cooperative effort.

Weed ID Team members Seth Bernard Abugho, Spencer Samuelson, Rui Liu and Prabhu Govindasamy spent the afternoon with Dvorak identifying weeds infiltrating the garden. The species located are included in the table below:

<table>
<thead>
<tr>
<th>Common name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Horseweed</td>
<td>Conyza canadensis</td>
</tr>
<tr>
<td>Nodding spurge</td>
<td>Chamaesyce nutans</td>
</tr>
<tr>
<td>Carolina bristlemallow</td>
<td>Modiola caroliniana</td>
</tr>
<tr>
<td>Yellow wood sorrel</td>
<td>Oxalis stricta</td>
</tr>
<tr>
<td>Goosegrass</td>
<td>Eleusine indica</td>
</tr>
<tr>
<td>Large crabgrass</td>
<td>Digitaria sanguinalis</td>
</tr>
<tr>
<td>Bahiagrass</td>
<td>Paspalum notatum</td>
</tr>
<tr>
<td>Annual rabbitfoot grass</td>
<td>Digitaria sanguinalis</td>
</tr>
<tr>
<td>Spiny sawthistle</td>
<td>Sonchus asper</td>
</tr>
<tr>
<td>Cutleaf evening-primrose</td>
<td>Oenothera laciniata</td>
</tr>
<tr>
<td>Unknown species</td>
<td></td>
</tr>
</tbody>
</table>

Weed Identification team members work to identify invading species in the garden on the roof of the Langford Building on the Texas A&M main campus. Photo by Jake Mowrer

Dr. Bruce Dvorak, right, with members of the Weed ID team: from left to right - Seth Abugho, Spencer Samuelson, Rui Liu and Prabhu Govindasamy. Photo by Jake Mowrer

Students in the new Sports Field Construction Class had the opportunity to construct a putting green to USGA specifications. They were involved in each step of the project including the initial survey, installation of drain and irrigation lines, laying four inches of pea gravel and a twelve inch sand root zone. The area will soon be sprigged with MiniVerde bermudagrass.

New Turfgrass Science Class Gives Students Hands-on Experience
Advanced Degree Recipients

Congratulations to all our graduate students who are receiving an advanced degree this month! We are very proud of you and the efforts you have made the past several years and wish you the best of luck in your upcoming endeavors.

Agronomy

Melanie L. Aiosa
Melanie received her Master of Science in Agronomy under the supervision of Dr. Clark Neely and Dr. Monte Rouquette.
She grew up in Paris, Tennessee, and earned her Bachelor of Science in Agriculture at the University of Tennessee at Martin.
Melanie has accepted a position in Montgomery County, Tennessee, as an Extension Agent for 4-H.

Justine Lee Christman Grassia
Justine received her Master of Science in Agronomy under the supervision of Dr. Seth Murray.
A native of Red House, Virginia, Justine earned her Bachelor of Science in Agroecology at the University of Wyoming.
Justine and her husband have recently relocated to northern California. She will spend some time exploring the area before she begins looking for employment.

Lauren Gale Woloohoijian
Lauren received her Master of Science in Agronomy under the supervision of Dr. Clark Neely.
She grew up in West Greenwich, Rhode Island, and earned her Bachelor of Science in Dairy Science from Virginia Tech University.
Caitlyn Elizabeth Cooper
Caitlyn received her Doctorate in Agronomy under the supervision of Drs. James Muir and Georgianne Moore. A native of Jacksboro, Texas, Caitlyn earned her both her Bachelor’s and Master’s degrees from Tarleton State University. She has accepted a position with Texas A&M AgriLife Research in Vernon as an Assistant Professor in Rangeland Ecophysiology.

Sumit Sharma
Sumit received his Doctorate in Agronomy under the supervision of Dr. Nithya Rajan. Originally from Ludhiana, Punjab, India, he earned his Master of Science in Plant and Soil Science from Oklahoma State University. Sumit started his new job as a Post-Doc at OSU the last week of April.

Drew Gholson
Drew received his Doctorate in Soil Science under the supervision of Dr. Diane Boellstorff. Originally from Iowa Park Texas, Drew earned his Bachelor of Science in Rangeland Ecology & Management and his Master of Science in Water Management & Hydrological Science both at TAMU. Drew will continue to work as an AgriLife Extension Specialist in College Station.

Brittany Nicole Sousa
Brittany received her Master of Science in Soil Science.
Plant Breeding

**Nanyen Chou**

Nanyen received her Ph.D. in Plant Breeding through our distance education program under the supervision of Dr. Steve Hague.

Originally from Taiwan (R.O.C.), Nanyen earned her B.S. from National Taiwan University and her M.S. from Texas A&M. She will continue working for Production Services (CPS), where she has been employed throughout her PhD program.

**Manuel Michel**

Manuel earned his Master of Science in Plant Breeding through the distance program under the supervision of Dr. Seth Murray.

**Laura Elizabeth Brown**

Laura received her Master of Science in Plant Breeding through the distance education program under the supervision of Dr. Kevin Crosby in the Department of Horticulture.

Dr. Cralle Retires

Dr. Harry Cralle did not want a big party or a lot of recognition upon his retirement, but his colleagues and students could not let him go without expressing their appreciation. Cralle retired after 34 years of teaching. His courses included world food and fiber crops; social and environmental aspects of plant physiology; Great Plains settlement and farming; and social and ethical aspects of international cropping systems.
Congratulations
Department of Soil and Crop Sciences
Class of 2017!

Trevor Austin
earned a Bachelor of Science in Turfgrass Science.
Trevor has interviews pending with several colleges for positions in sports field management.

Robert Chapa
earned a Bachelor of Science in Plant and Environmental Soil Science - crop option, with a minor in Horticulture.

James Cross
earned a Bachelor of Science in Plant and Environmental Soil Science - crop option.

Zachary Dickson
earned a Bachelor of Science in Plant and Environmental Soil Science - crop option.

Omar El Hassan
earned a Bachelor of Science in Plant and Environmental Soil Science - crop option.

Kevin Hejl
earned a Bachelor of Science in Turfgrass Science.

Jonathan Hernandez
earned a Bachelor of Science in Plant and Environmental Soil Science - Soil & Water Option. He plans to attend graduate school to pursue a Ph.D. in Entomology and become a research professor.

Vanessa Limon
earned a Bachelor of Science in Plant and Environmental Soil Science - Soil & Water Option. She has an internship with Indigo Agriculture this summer with plans to enroll in graduate school and seek employment with the Texas Water Resource Institute this fall.

Ryan Leggett
earned a Bachelor of Science in Plant and Environmental Soil Science - crop option.
Sydney O’Daniel earned a Bachelor of Science in Plant and Environmental Soil Science - crop option, and Animal Science. She will remain here at TAMU to begin working on her Master’s degree in Physiology of Reproduction under Dr. Ron Randel.

James Roundtree earned a Bachelor of Science in Plant and Environmental Soil Science - crop option.

Brady O’Neal earned a Bachelor of Science in Plant and Environmental Soil Science - crop option. He will be moving to Austin where he has accepted a position as a production manager for LandCare.

Colton Shelton earned a Bachelor of Science in Turfgrass Science. He has been offered a job at a golf course and has an interview pending with a sod company.

Isaac Silva earned a Bachelor of Science in Plant and Environmental Soil Science - crop option. He will be returning to Chinandegay, Nicaragua, where he has accepted a position at the sugar mill.

Jonathan Stanush earned a Bachelor of Science in Plant and Environmental Soil Science - crop option. He will be working as a crop consultant with Crop Quest in Uvalde, Tx., and helping run his family’s farm.

Marshall Tolleson earned a Bachelor of Science in Plant and Environmental Soil Science - crop option. He will be spending the next two years in Cameroon, Africa, as a crop extension volunteer in the Peace Corps.

Kimberlyn Pace earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option and a watershed certificate. She will remain at TAMU to pursue a Master’s degree in Soil Science under Dr. Jake Mowrer.

Martin Tomlin earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option.
Adryn Foster Velasquez earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option.

Matthew Wilhelm was a double major, earning Bachelor of Science degrees in Plant and Environmental Soil Science - crop option, and Agriculture Economics. Matthew has accepted a position as an agronomist for Crop Quest Inc. near Dimmit, TX with the hope of working his way to the Hereford area where he can also assist his father on the family ranch.

Tri Tran was a double major, earning Bachelor of Science degrees in Plant and Environmental Soil Science - crop option, and BioEnvironmental Sciences.

Rory Tucker earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option. She will be working in the Klein Lab and then taking some time off before starting graduate school.

Stephen Vansile earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option. He is looking for a research position, and considering first doing a hitch in the military.

Adryn Foster Velasquez earned a Bachelor of Science in Plant and Environmental Soil Science - soil & water option.

Matthew Wilhelm was a double major, earning Bachelor of Science degrees in Plant and Environmental Soil Science - crop option, and Agriculture Economics. Matthew has accepted a position as an agronomist for Crop Quest Inc. near Dimmit, TX with the hope of working his way to the Hereford area where he can also assist his father on the family ranch.

Soil & Crop Sciences worker named Student Employee of the Year

Shelby Schiefelbein, a junior Animal Science major who has worked for the Soil and Crop Sciences department for the past three years, was named 2017 Texas A&M Student Employee of the Year and was one of two recipients of the Class of ‘56 Student Employee Endowed Award.

It was the first time one student has received both awards.

Those who work with her say that “the positive attitude she brings to the office each day inspires everyone. Her smile often lifts the spirits of those with whom she works – you can’t help but smile back when she smiles at you. Her efforts often encourage the other student workers to strive to perform at her level.”

The administration believes that Shelby sets the standard for student worker in professionalism, work ethic, responsibility, and trust. She has been a tremendous asset to our department.
Six professors were honored by the Center for Teaching Excellence at Texas A&M University’s inaugural Aggies Celebrate Teaching! reception recognizing transformational learning.

Soil and Crop Sciences professor Dr. Jake Mowrer was one of those six, having been nominated by senior Vanessa Limon.

Dr. Mowrer joined the A&M faculty in 2015 as an Assistant Professor and Extension Specialist in Soil Nutrient and Water Resource Management. His appointment is 100% AgriLife Extension.

Limon has worked for Dr. Mowrer this past year as a student research assistant, and conducted research under his supervision for her SCSC-491 course, Undergraduate Directed Research.

“I nominated Dr. Mowrer for the Center for Teaching Excellence’s ACT! award because he has been one of the most influential figures of my undergraduate education,” said Limon. “He challenged me to think deeply and innovatively on concepts I otherwise would only have academic reference on. He also entrusted me with the independent completion of tasks where I developed strong problem-solving skills.”

“Dr. Mowrer encouraged me to pursue higher education and helped me to believe in myself to achieve goals which only a year ago seemed entirely out of reach,” Limon continued. “His mentoring has greatly impacted my undergraduate experience and my life.”

Dr. Mowrer feels that any time your work is acknowledged it is a very good thing, but this award is particularly special to him.

“The coolest thing about this award is that it is from a student,” Mowrer said with a big smile. “That really means a lot to me.”

There were over sixty nominations for the ACT! awards received from students from all across the A&M campus.

Dr. Mark Hussey ’79 was selected to receive the Texas A&M Association of Former Students 2017 Distinguished Achievement Award for Administration.

He has been with the department thirty-four years, working his way from a graduate student to Vice Chancellor and Dean of the College of Agriculture and Life Sciences and a term as interim president of TAMU.

Dr. Hussey currently oversees the Texas A&M University System’s four agricultural agencies: AgriLife Research, AgriLife Extension, Texas A&M Forest Service, and Texas A&M Veterinary Medical Diagnostic Laboratory, as well as the College of Agriculture and Life Sciences.

He has managed the creation of an unprecedented construction campaign that makes the west campus home to 13 of 14 academic departments and the headquarters for Texas A&M AgriLife. He raised more than $6 million dollars to build the first phase of The Gardens at Texas A&M University, a unique and beautiful outdoor classroom for Aggies and the community.

He initiated the AgriLife Advanced Leadership Program, which provides leadership training for AgriLife faculty leaders in the making. He is an advocate for the land-grant University system of research, teaching and extension, holding national leadership positions in the Association of Public and Land-Grand Universities.
Dr. David Stelly has been named the Cotton Researcher of the Year by the International Cotton Advisory Committee, known as ICAC.

Since being formed in 1938, ICAC’s global role has been to raise awareness of emerging issues, provide information relevant to the solving of problems and to foster cooperation in the achievement of common objectives.

Stelly’s research is leading to advances in multiple scientific and applied disciplines of cotton, the ICAC stated.

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.

“Dr. Stelly has made great strides in the world of cotton over the years and we are proud to have him on our faculty and research team,” said Dr. David Baltensperger, head of Texas A&M’s soil and crop sciences department.

ICAC, in recognizing Stelly, said, “Dr. Stelly has revolutionized global cotton research capabilities by enabling global use of single nucleotide polymorphisms for large-scale and targeted small-scale applications. He spearheaded formation of the international Cotton SNP Chip Consortium and development of the CottonSNP63K Array, which enables high quality, high-density SNP genotyping of Upland cottons.

Stelly’s genetic work has featured extensive efforts to create and analyze chromosome substitution lines. By replacing entire chromosomes of cotton with genes from a related species, he established means to more effectively harness the non-cultivated species germplasm resources for genetic analysis and the breeding of improved upland cotton.

He is chair of the International Cotton Genome Initiative, past president of the National Association of Plant Breeders, external reviewer of the USDA’s Plant Genetic Resources, Genomics and Genetic Improvement program, member of the International Organizing Committee for WCRC-6, and the National Academy of Sciences GE Crops Committee.

He has twice received the Cotton Genetic Research Award. Recently, he became a Fellow of the Crop Science Society of America., and received the Lifetime Achievement Award at the National Conference on Genetics and Cytogenetics at the University of Agricultural Sciences, Dharwad, India.

Baumann Named Professor Emeritus

The Texas A&M University Board of Regents has named Dr. Paul Baumann as a Professor Emeritus. Baumann recently retired after 27 years as a professor in the soil and crop sciences department and AgriLife Extension State Weed Specialist.

Baumann spent 8 years in the private sector before joining the Texas A&M faculty in 1989. He became the state weed specialist in 1999.

Baumann has worked with numerous agencies and foundations such as the National Park Service, conducting weed surveys and providing management recommendations.

He is a member of the Weed Science Society of America, the Southern Weed Science Society and the American Agronomy Society, serving on several committees for each organization.

Before retiring, he had been presented the Vice Chancellor’s Award for Excellence in AgriLife Extension.
Undergraduate Scholarship Recipients

Undergraduates in the Soil and Crop Sciences Department were recognized for outstanding achievement in early April at the Awards and Recognition Banquet held at the Brazos Center.

Texas A&M students who carry fifteen credit hours, maintain a 3.75 grade point average and have no grades lower than a “C” are designated as members of the Dean’s Honor Roll. Soil and Crop Sciences had nine students were named to the Deans List for the fall 2016 semester, with thirteen making the list in the spring 2017. Those students were:

- Zachary Dickson - fall
- Justin Dixon - spring
- Jared Goldman - fall and spring
- Franklin Linam - fall
- Valentin Gomez - spring
- Jonathan Hernandez - spring
- Ryan Janda - spring
- Sydney O’Daniel - fall and spring
- Brady O’Neal - spring
- Jonathan Prieto - fall and spring
- Jonathan Stanush - fall and spring
- Rory Tucker - fall
- Lorena Valle - fall and spring
- Matthew Wiethorn - fall and spring
- Kacie Wynne - spring

Scholarship recipients were also recognized. The Soil and Crop Sciences department is fortunate to have a number of individuals, groups and businesses who are willing to invest in the future of agriculture by supporting students with scholarships. We truly appreciate everyone who works to help our students succeed.

2016-17 Outstanding Freshman
Preston DeJong

2016-17 Outstanding Sophomore
Nicole Shigley

2016-17 Outstanding Junior
Brett Martin

2016-17 Outstanding Senior
Matthew Wilhelm

David Bryant
Billy, Gloria, and Gerry Conrad Scholarship
Cecil & Ola Beasley Goodman Scholarship

Kirstin Burnett
Jack Hulgan Memorial Scholarship
Texas Turfgrass Assn. Scholarship
Joseph D. Whitaker’63 Scholarship

Keith Hanslik
H&H Ranch Scholarship
Scholarship Winners continued

Lauren Hays
Billie B & Gloria S Turner Production Scholarship

Jon Kyle Huvar
Kenneth & Marion Porter Endowed Scholarship

Ryan Janda
McAfee Memorial Scholarship

Shannon Johnson
Sequor Foundation/Milberger Turfgrass Scholarship

Matthew Joost
Texas Seed Trade Association Scholarship

Caitlyn Lakey
Kenneth Lindsey Memorial Scholarship
J.F. Mills Endowed Scholarship
H. Jean Mills Memorial Scholarship
Trotter Endowed Scholarship
Allen & Joan Wiese Endowed Scholarship

Franklin Linam
Joe S. Campise Memorial Scholarship
Luther Jones Outstanding Junior Scholarship
Pat & Ed Runge Future Leaders Endowed Scholarship
H&H Ranch Scholarship

Brett Martin
Keith Ebanks Memorial Scholarship
Texas Turfgrass - Paul Drummet Scholarship
Texas Turfgrass - William E. ”Bill” McLaughlin Scholarship

Neil Myers
James Foster Scholarship
Cecil & Ola Beasley Goodman Scholarship
Charles A. Schneider ’70 Memorial Scholarship
Scholarship Winners continued

William Peebles  
Dick Holland Endowed Scholarship  
Charles ’63 & Lynann ’66 Simpson Endowed Scholarship

Brittany Polasek  
Dick Holland Endowed Scholarship

Jonathan Prieto  
Texas Seed Trade Association Scholarship

Garrett Reed  
Texas Seed Trade Association Scholarship

Corey Ring  
H&H Ranch Scholarship

Savannah Shelnutt  
Morris G. Merkle Endowed Scholarship  
Kenneth & Marion Porter Endowed Scholarship  
Olin & Thelma Smith Endowed Scholarship

Nicole Shigley  
Church Scholarship  
Dr. Cleveland & Frances Gerard Scholarship  
France & Miles Hall ’39 Endowed Scholarship  
Kenneth & Marion Porter Endowed Scholarship

Kaitlin Tanner  
Texas Turfgrass - A.W. & Barbara Crain Scholarship  
Texas Turfgrass - William E. “Bill” McLaughlin Scholarship

Matthew Wiethorn  
J. Charlie & Judy Blue Scholarship

Not pictured are: James Cross - H&H Scholarship; Kevin Hejl - Texas Turfgrass Research, Extension & Education Endowment; Jonathan Stanush - H&H Ranch Scholarship; Michael Payne Whatley - H&H Ranch Scholarship
Dr. Cristine Morgan and her soil judging team participated in the 2017 National Collegiate Soils near Malta, Illinois, in late April with twenty-three other teams from across the United States. They braved sharp winds and rain, slogging through the mud in many of the soil pits.

The event is a learning opportunity for the students as well as a competition. It is held in different regions of the country each year, which presents different soil types and different characteristics than the students may be accustomed to seeing. They spend several days practicing before the actual contest, learning from professional soil scientists.

In the contest, the students examine the texture, color and friability of the soils in three different pits to determine the type and quality of soil present. They also calculate the slope of the land around the pit, determining where on the slope the pit is located - the peak, backslope, toe slope, foot slope or bottom. All of those factors will impact the quality and makeup of the soil.

“We did not place as well as we would have liked, but we had a good time,” Morgan stated. “Even though our van broke down and it was really cold the day of the contest!”

Soil Judging Team travelled to Nationals

The team from left to right - Dr. Cristine Morgan, Sam Shroyer, Rory Tucker, Michael Bartmess and Nicole Shigley.

A&M presence in Washington, DC

Dr. Seth Murray, who is currently on sabbatical serving as Senior Advisor of Agricultural Systems in the Office of the Chief Scientist (OCS), U.S. Dept. of Agriculture in Washington, D.C., spoke to the Council of Scientific Society Presidents about UAV applications in agriculture production and research.

Dr. David Baltensperger also had the opportunity to participate in the meeting which included the leaders of seven scientific societies.
Scientist Bhoja Raj Basnet knows first hand what it is like to be a smallholder farmer.

Basnet's earliest memories were formed on a one-acre subsistence farm in Jhapa, in southeastern Nepal, a fertile area in a country where the livelihoods of nearly 65 percent of people depend on agriculture.

The tiny farm provided the foundation for a journey that led ultimately to a doctoral degree in the United States and a career as a wheat breeder in Mexico at the International Maize and Wheat Improvement Center (CIMMYT).

Wheat plays a major role in Nepal's agricultural landscape. It is the country's third largest crop, cultivated on about 750,000 hectares of arable land each year with an average yield of 2.5 tons per hectare. Above wheat, farmers favor only rice and maize.

“I grew up playing with the plants and soil on my family’s farm and before I entered high school I knew I wanted to pursue a career in agricultural science,” Basnet explained. “As I got older I started to realize the importance of agriculture and how agriculture can really shape a child’s health and future. This is what really pushed me to pursue my career.”

Basnet went on to earn his master and doctoral degrees in plant breeding. After graduation in 2012 from Texas A&M University, Basnet joined CIMMYT as a postdoctoral fellow working in the bread wheat improvement program.

In 2014, Basnet began leading a project conducting research into hybrid wheat in collaboration with Syngenta, which involves researching and developing tools and technology for developing commercially viable hybrid CIMMYT wheat varieties.

Hybrid wheat is created when a breeder intentionally crosses two genetically distinct and stable wheat lines to produce an offspring that combines the best traits of the parents. The process of developing a hybrid can take years, as traits are carefully chosen to achieve desired characteristics, such as increased grain yield or stress tolerance.

The principle behind hybrid varieties is exploitation of heterosis, the superiority of the hybrid offspring over its parent varieties. This is a biological phenomenon observed in almost all living organisms. However, the magnitude of “heterosis” varies significantly based on several biological and environmental factors.

“Hybrid wheat has always fascinated me,” Basnet said, adding, “I really want to see the end results and to see this work succeed.”

Hybrid wheat varieties have proven to be tricky. In fact, CIMMYT’s first attempt to develop hybrid wheat occurred in the 1960s and despite stops and starts over the years, has been ongoing since 2010.

Increasing investment and long-term funding commitments are a key prerequisite to achieving success in crop improvement, especially in breeding, Basnet said. Unlike traditional wheat variety development, successful research into hybrid wheat varieties depends largely on the willingness and active engagement of private sectors into research and seed businesses.

Basnet is working to develop a hybrid wheat foundation at CIMMYT by using new technology and existing research on hybrids. This hybrid wheat foundation will create genetic diversity within wheat to increase genetic gains and develop tools that can produce large amounts of hybrid seed.

“Currently less than one percent of wheat crops globally are hybrid wheat,” Basnet explained. “We need to continue with this research, as hybrid crops could lead to 15 to 20 percent greater yield potential and in particular higher stability, a very important trait with climate change.”
Sympathy and Concern

Please keep these members of our Soil and Crop Sciences family in your thoughts and prayers.

Amanda Ray as she mourns the loss of her mother, Bonnie Holland, who passed away suddenly and unexpectedly April 16. Amanda is an Administrative Coordinator in the teaching office who provides administrative support to our graduate students.

Gladys Wilding has been moved to the skilled nursing facility where Dr. Joe Dixon is recovering - Crestview Retirement Community, 2505 E. Villa Maria Rd, Bryan, 77802. She will complete her recovery there, undergoing physical therapy and occupational therapy. She is recovering from an aortal tear which occurred in early December, and ensuing complications.

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**Calendar**

**May**

12 - Graduation - TAMU College of Agriculture and Life Sciences
15 - FAC meeting 1:30 pm
16-18 - Southern Department Heads Meeting
17 - Mid-term Promotion & Tenure meeting
17 - Bushland bi-annual wheat field day
19-20 - Dr. Virender Kumar, IRRI senior weed scientist, visiting TAMU
24 - Deadline for Staff Evaluations
24 - Faculty Meeting
24 - Watershed Stewards Program - Ennis, Texas

**June**

1-4 - COADC Meeting - South Padre
4-7 Texas Seed Trade meeting and Production Research Conference - Galveston
6 - San Patricio County Crop Tour - Sinton, TX
15 - AgriLife Research and Extension Center - Overton 50th Anniversary
20 - Stiles Farm Field Day - Thrall, TX
29 - Horticulture Field Day - Overton

**July**

9-11 - Texas Turfgrass Summer Meeting - Horseshoe Bay
11 - Watershed Stewards Program - Angleton
25-26 - Soils Critique - Lubbock

**Save the Date**

August 9-10 - Small Grain Workers Meeting - Notice New Dates!!
August 15 - Rainwater Harvesting Program - Seguin
August 29 - Promotion & Tenure Faculty Meeting 1:30 p.m.