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SAM STEEL WAY

COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES » SPRING 2018



The college opened its doors April 14 for the first annual Discover the College of ACES Open House, which was attended by hundreds of people from across the community. Skeen Hall, Gerald Thomas Hall, Knox Hall, the Livestock Judging Pavilion, the Tejada Building and the Equine Center (pictured) were open to visitors who heard from students, faculty and staff about all the great programs and accomplishments at the college.

Upcoming Events

Sam Steel Pinning Ceremony:

Friday, May 11, 2018, NMSU
Music Center, 3:00 p.m.

Sam Steel Society Ceremony

Alumni Reception: Friday,
May 11, 2018, Gerald Thomas
Hall, 100 West Café, 5:00 p.m.

College of ACES Homecoming

Breakfast : Friday, October 5,
2018, Gerald Thomas Lawn,
8:00 a.m.

Sam Steel Society Alumni Homecoming Reception and

TAPS: Friday, October 5, 2018,
100 West Café, 4:00 p.m.

NMSU Homecoming:

Saturday, October 6, 2018

NMDA and NMSU College

of ACES Ag Day: Saturday,
October 20, 2018, Pan Am
Parking Lot, 12:00 pm

Sam Steel Pinning Ceremony:

Friday, December 7, 2018,
NMSU Music Center, 3:00 pm

Sam Steel Society Ceremony

Alumni Reception: Friday,
December 7, 2018, Gerald Thomas
Hall, 100 West Café, 5:00 pm

For more information, check
out the news & events on the
Sam Steel Society Page at:
aces.nmsu.edu/samsteel/
samsteelsociety



FROM THE DEAN

College launching exciting initiatives

» DEAN ROLANDO A. FLORES

HELLO ALUMNI AND friends of the College of ACES:

I would like to take this opportunity to tell you about the College's enrollment and recruitment efforts and about two exciting projects on which we have been working: the General Obligation Bond and the Indian Resources Development program. Both of these programs will help with recruitment and retention.

The ACES College has nearly 1,440 undergraduate and almost 220 graduate students. We are proud to say that despite not having a recruiter position, in the last year we were able to increase enrollment by more than 2 percent. Across the NMSU Main Campus, ACES continues to have the strongest enrollment, retention rates for undergraduate students, and completion rates for graduate students.

ACES students come from 28 states, including New Mexico, and from 26 different countries. Approximately one-half of our students have a Hispanic background and about 6 percent self-identify as Native American. Although we are proud of having such a diverse student body, we are striving to increase the representation of Native American students to match at least the 10.5 percent of the population of New Mexico that group represents.

Recently the College was entrusted with the responsibility of overseeing the Indian Resources Development (IRD) program. The IRD is the product of a 1978 NM Statute providing funds to NMSU to create educational opportunities and offer work experience in the areas of agriculture, engineering, and business to Native American students. The other goal of the program is to help strengthen

the student communities' economic self-sufficiency and promote the economic growth and welfare of New Mexicans via the support the program affords to the students. You can learn more about the IRD program in this newsletter.

The other major initiative of the College is the Agricultural Modernization and Educational Facilities or 2018 General Obligation Bond. The 2018 GO Bond will support our College's commitment to providing students with hands-on learning opportunities and better training facilities. The proposed buildings and spaces will increase student involvement in research and also enhance the training in day-to-day operation of livestock facilities. This will help with student placement upon graduation. Other positive outcomes of the GO Bond are discussed in this newsletter.

In the College we have a strong sense of community and are proud of our work in teaching, research, and Extension. We are also very thankful for the support you provide through your volunteer work, gifts, and advocacy. Together, let's continue to advance the mission of ACES of becoming an engine for the economic and community development of New Mexico, one student, one industry, and one community at a time.



Three facility projects slated for 2018 state GO Bond election

» JANE MOORMAN

A **SAN ENGINE FOR ECONOMIC AND** community development, New Mexico State University's College of Agricultural, Consumer and Environmental Sciences will increase its performance and help drive New Mexico to a better future with help from the upcoming General Obligation Bond enhancements.

"By supporting the GO Bond in November's election, voters will be increasing educational opportunities and contributing to economic growth, thus improving the lives of New Mexicans," said Dean Rolando A. Flores. "The New Mexico Legislature and governor approved \$25 million of the bond money for the projects."

The projects are a food science security and safety facility, animal nutrition and feed manufacturing facility and biomedical research center.

"Each of these facilities will strengthen the ability of the College of ACES to improve lives through its academic, research and Extension programs. These facilities will allow us to train our students with the newest techniques to produce safer and healthier foods."

Food Science Security and Safety Facility

The food science security and safety facility's design features upgrades to keep NMSU poised to be an international leader in food processing and protection initiatives and promoting food safety.

The space will allow NMSU to conduct outreach through workshops and short courses in meat processing, food safety and production. Its laboratories and pilot plants will support emerging research areas, such as minimizing the water use in food production.

As an added benefit to farmers and ranchers, it will allow for limited production of meat processing for niche markets.

Animal Nutrition & Feed Manufacturing Facility

The animal nutrition and feed manufacturing facility's design features a premier livestock and care facility for teaching and outreach, plus space to investigate new feed processes and blends; thus, creating potential value-added alternatives for low grade residues and byproducts of the agriculture industry.

It will also have safety and efficiency improvements for all users through consolidated and technology upgrades.

Biomedical Research Center

The biomedical research center's design features accommodations for researchers in diverse fields across the NMSU campus.

NMSU is ideally situated to address key border population health problems, such as obesity, mosquito borne virus and cancer. Researchers in three colleges and seven departments will be served by the new facility. The facility will provide the ability to test cancer fighting molecules, improving research productivity.

Together, the proposed facilities will enhance NMSU's teaching, research and outreach, and will advance STEM education, particularly within three colleges and 16 departments.



Matanza!

Valencia County Extension joins traditional cooking competition

» JANE MOORMAN

FOR FOUR YEARS THE Valencia County Cooperative Extension Service has participated in a modern version of a centuries-old tradition brought to the New World by the Spanish Conquistadors in the 16th Century.

Led by Newt McCarty, agricultural agent, and Laura Bittner, family and consumer sciences agent, a team of Extension volunteers participate each year in the World's Largest Matanza cooking competition.

Similar to a Hawaiian luau, a matanza involves the butchering and cooking of a pig. Historically, before modern food preservation, the meat was shared with neighbors.

"We participate in this tradition to engage with our community and to showcase the support, collaboration, and involvement of NMSU CES in our county and throughout the state," said Bittner. "Also to show our support of the scholarship program provided through the Hispano Chamber of Commerce assisting Valencia County students, many of whom attend NMSU."

Beginning in 2000, the Valencia County Hispano Chamber of Commerce has held the

World's Largest Matanza each January as a way to raise money for college scholarships presented to Valencia County college students while preserving a cherished tradition. To date, the event has raised more than \$130,000 and helped more than 200 students.

The annual event, held the Saturday prior to Superbowl Weekend, is a community event. People from near and far, between 4,000 and 12,000 depending on the weather, pay an admission fee to be able to visit each team's camp where they sample the team's version of the traditional dishes. They enjoy chicharrones, carne adovada, pastellitos, albondigas, papas and red chile sauce.

While waiting for the preparation of the traditional dishes, each team pacifies hungry attendees by serving unique dishes featuring red chile, such as red chile pancakes, brownies with red chile and popcorn sprinkled with red chile.

During the cooking competition, teams prepare five recipes to be judged in the categories of liver, carne adovada, chicharrones, specialty pork dish and Iron Pig.

For the Iron Pig competition, each team is given a brown paper bag filled with the



miscellaneous ingredients. The team has 50 minutes to prepare a dish featuring all of the provided ingredients.

The Valencia County Extension team has placed in at least one category each year that it has participated. In 2015 they won third overall with a first in specialty dish, second in carne adovada and third in Iron Pig. In 2016 they were first in Iron Pig and second in chicharrones. In 2017 they won second for their carne adovada, and second in the red chile and pastellitos open competition.

This January they were awarded first in chicharrones and third in Iron Pig.

College builds relationship with Native American community

» JANE MOORMAN

The Indian Resource Development program has returned to the College of Agricultural, Consumer and Environmental Sciences. Since 2014, the College of Business has managed the program.

"We're delighted to have the program back in the college," said Dean Rolando A. Flores. "This speaks well of our efforts to work closer with the pueblos and tribes and our efforts to recruit more undergraduate and graduate students from the pueblos and tribes."

The Indian Resource Development program was created by state statute in 1978 to "provide funds to New Mexico State University in order that agricultural and engineering education, and work experience opportunities

may be provided to Native American students to help prepare them for agricultural sciences, engineering sciences and management position."

"We are looking forward to moving the program ahead and meeting some of the needs of the Native American community," said Jerry Hawkes, College of ACES interim associate dean and director of academic programs. "We want to see greater student engagement. We want to add value back to the Native American community wherever we possibly can. We think this program may be an avenue to do just that."

The original purpose of the law is to assist Native American tribes in developing agricultural, mineral, energy, forestry, wildlife, recre-

ation and business resources and associated technical and managerial resources and other areas deemed necessary to promote their economic self-sufficiency.

Many of the college's Cooperative Extension Service programs currently work with the Native American community throughout the state. This will continue through programs provided by county offices, state specialists, the Rural Agricultural Improvement and Public Affairs Project, and the Tribal Extension program.

The statute also requires establishment of an advisory committee consisting of representatives of the Native American tribes nominated by the tribal president. The members will include one individual representing the Jicarilla

and Mescalero Apache tribes, one representing All Pueblo Council and one representing the Navajo Nation.

"We have some broad ideas of what the pueblos and tribes would like us to provide, but the advisory board will play a big role in the direction we take the program," Hawkes said.

Dean Flores has conducted listening sessions with the leadership of several pueblos and tribes.

"Recently our ACES leadership team met with Mescalero's leaders to look at some programmatic efforts we can do in Extension, academics and research," Hawkes said. "This is the first step in making this program beneficial to the Native American community."

Chile Pepper Institute Endowment

Devoted to education and research related to chile peppers

» MELISSA R. RUTTER

The Chile Pepper Institute is closer to reaching its \$1 million goal for an endowed chair. The endowed chair will ensure that there are always funds available for chile pepper research at New Mexico State University.

Cindy Nicholson, director of development in the College of ACES, said this endowed chair will especially be important so that if anything happens in the chile pepper industry there are funds to help research the cause of issues.

“An endowed chair will keep the chile pepper industry in the state and across the country proactive. If there’s a virus in the chile pepper plants, professionals can come to NMSU and we will have research that can help them solve the problem. The chair will put out tens of thousands of dollars each year and will always ensure that we have money for education and research related to chile peppers,” Nicholson said.

Something that has been years in the making, the CPI has received a lot of help from donors such as John and Sue Hard who own CaJohns Fiery Food Company in Columbus, Ohio. John and Sue made the decision to begin helping the CPI over dinner one night during a week-long trip to Las Cruces back in 2008. They offered to start making a sauce and to have funds go toward the institute.

“From there we just continued to make products for the Chile

Pepper Institute. Then the development council formed and we got involved. We wanted to push to get that million dollars for the CPI Endowed Chair so we tried to help the best we could and that was with products and also some money as well. We’ve been supporting this for almost 10 years now,” John Hard said.

To push the CPI to its goal a new hot sauce has been in the works that pays tribute to one of NMSU’s pioneering researchers and horticulturists while also raising funds.

“To create the hot sauce, we’re mainly using a new cultivar, NuMex Sandia Select, that is hotter than the New Mexican pod type developed by Fabian Garcia in the late 1800s.

We’re also teaming up with NMSU’s Marketing and Communications to

make very special labels that feature Fabian Garcia and the chiles he grew. When the hot sauce is completed we will sell it here at the CPI

with funds going into the endowed chair and into the Sue and John Hard scholarship,” said Paul Bosland, director of the Chile Pepper Institute.

Bosland said the money that has been raised so far has been a grass roots efforts with the money coming from small donors and members of the CPI.

If you would like to contribute to the CPI’s endowed chair you can visit: <https://cpi.nmsu.edu/donate-the-chile-pepper-institute>



Message from Your Ambassador



Ya’at’eeh. Shi ei Vanisha Sam yinishye. Dine nishli. Todik’ozhi nishli. Bit’ahnii bashishchiin. To’ahani dashicheii. Ta’neeszahni dashinali. Hello. My name is Vanisha Sam. I am from the great Navajo Nation. I am Salt Water clan born for Within His Cover clan. My maternal clan is Near the Water clan and my paternal clan is the Tangle clan. This is how I introduce myself in my Navajo language.

I grew up on the Navajo Nation in Brimhall Nizhoni, New Mexico. I am second to the youngest of six children. I am currently a junior, majoring in animal science. My reason for attending NMSU was because I was told the College of Agricultural, Consumer and Environmental Sciences has an excellent program for pre-veterinary. At that point, I did not know what to expect since I was not raised around livestock. All I knew was that I was determined to do what I love, which is learn and work with animals.

Since coming to the College of ACES, I am overwhelmed about how much of an impact the college has had on my life. From not knowing how to ride a horse to knowing how to ride a horse. From being a shy, quiet person to being unafraid of getting involved and taking on new opportunities. This college has inspired me to do more in life and I hope to be able to work with livestock after I graduate but also, attend pharmacy school in the years to come. Being able to represent such an amazing college as an ambassador has been an honor and I have loved sharing with others the many opportunities the College of ACES and NMSU have to offer. I truly believe that the College of ACES at NMSU is a great place for anyone who wants to learn and make a difference in the world, but at the same time, be part of a family. Go AGGIES!

Shelton honored as outstanding graduate for spring 2018

» SAVANNAH M. MONTERO

NEW MEXICO STATE University Aggie Chase Shelton, from Washington, Georgia, received the title of College of Agricultural, Consumer and Environmental Sciences outstanding graduate for spring 2018.

Shelton studied agriculture and extension education. He is the president of the Collegiate Future Farmers of America and currently works for the NMSU Cooperative Extension Service. Before school, he spent four years in the Marine Corps.

He was inspired to pursue agriculture because of a high school teacher, who had a goal of making class amusing so children would appreciate education over trouble.

Shelton enjoys playing the guitar, singing, fly fishing, hunting and training his dogs. He loves dogs and even compares his personality to one.

"I think I am like an old house dog," Shelton said. "I will sit in the corner and keep to

myself, but I'm there if you need a friend or a little help."

After spending four years in Las Cruces, Shelton said his biggest success is measured in the quality of people he has met through the university.

"I moved to the area only knowing a handful of people and I have made more friends and found more than I deserve to have," Shelton said.

His favorite part about the College of ACES is how everyone helps students to become a better version of themselves. The professors, staff and students are some of the best people one can find.

After Shelton graduates, he plans to further his education with a master's degree, while continuing his work for the Cooperative Extension Service. His dream job is working as an Extension specialist.

"I enjoy working with producers to help diagnose and solve issues they have with their crops," Shelton said.



Student involvement creates opportunities

» XIMENA TAPIA

New Mexico State University senior Shayna Gallacher comes from a long line of Aggies. She is a fourth generation Aggie and has wanted to come to New Mexico State University since she was little.

"My joke is that I learned the Aggie fight song before I learned my high school's song," Gallacher said.

She will graduate in May with a bachelor's degree in agricultural economics and agricultural business with minors in marketing, business administration, finance and economics.

During her time at NMSU, Gallacher was involved in many student organizations and took on many leadership roles. She was an ambassador for the College of Agricultural, Consumer and Environmental Sciences from 2015 to 2017, and served as the president of the Chi Omega Sorority from November 2015 to December 2017. She is involved in the National Agri-Marketing Association, Ag Econ Club and the Chase Foundation Scholarship Mentor Program. Gallacher is currently serving as the Chief

Justice of the Associated Students of NMSU and as a Presidential Ambassador for the university.

"I really enjoyed all the organizations I've participated in. I enjoyed being an ACES ambassador because I felt really close to the college and the things that they were doing," she said. "Being a Presidential Ambassador has helped me build relationships with alumni, and that's something nice to look forward to as I prepare for graduation.

"I would really encourage that students get involved. I think it definitely brings them the Aggie spirit and a sense of community that a lot of students may miss if they don't get involved," she said.

After graduation, Gallacher plans on moving to Siloam Springs, Arkansas. There she will be working with the leadership development company Milestone Leadership as a project coordinator. This position will also grant her a full-ride scholarship to pursue a master's degree in business administration from John Brown University.

COURTESY PHOTOS



NMSU professor explores pharmaceutical uses for algae

» ADRIANA M. CHÁVEZ

An assistant professor in the Department of Plant and Environmental Sciences is looking into whether algae could one day take the place of your daily omega-3 supplements that are derived from fish, which feed on algae.

Algae may be the real source of high-value products that are beneficial to human health, said assistant professor Omar Holguin.

“Algae produce oil, and fish eat algae,” Holguin said. “My research project focuses on whether algae could be a source of polyunsaturated fatty acids.”

The American Heart Association recommends the consumption of polyunsaturated fatty acids, or PUFAs, to prevent heart disease, but most of the human dietary sources of PUFAs are derived from fish and fish oil. However, because of the accumulation of toxins in the environment, the composition of fatty acids in fish oil may not be consistent. Also, the decline in wild fisheries means there may not be sufficient sources of PUFAs for an increasing human population, Holguin said.

In the past, Holguin has received grants from the U.S. Department of Health and Human Services National Institutes of Health to fund his research into algae and PUFAs. Microalgae are sources of a variety of beneficial metabolites including fatty acids, Holguin said. Microalgae are capable of synthesizing and accumulating PUFAs, making them an alternative source for dietary supplements.

Holguin’s background includes research into algae as a biofuel and analyzing phytochemicals. Holguin, who is originally from Los Lunas, New Mexico, graduated from NMSU in 2002 with a bachelor’s degree in environmental science. He went on to earn his master’s and doctoral degrees in plant and environmental sciences, both also from NMSU. His father, Francisco Holguin, was the Extension agent for Valencia County for 20 years.

“One of Dr. Holguin’s many contributions to the department is his excellent mentorship of undergraduate and graduate students,” said Rolston St. Hilaire, head of the Plant and Environmental Sciences department. “He is actively training the next generation of scientists. Dr. Holguin contributes to our overall knowledge of the biochemistry behind natural product synthesis in microorganisms and higher organisms.”

Omar Holguin is guiding students on research into whether algae could also be a good source of pigments that could be used in cosmetics, in response to an increasing demand for vegan cosmetics. Several types of algae sourced from samples at Yellowstone National Park are being grown in Omar Holguin’s lab on the NMSU campus in various brilliant colors, including red, green and blue.

“Algae is the new Amazon,” Omar Holguin said, referring to the vast and biodiverse rainforest that covers most of South America. “Researchers are constantly isolating novel strains of algae.”

College names faculty, staff, industry, teacher awards

The ACES Awards Selection Committee voted on the 2018 faculty and staff nominations that were submitted for our distinguished awards. The award winners are listed below.

- New Mexico Outstanding Leadership Award, Marge McKeen
- Fabian Garcia Founders Award, Jon Boren
- Kringle the Cat Distinguished Teaching Award, Eric Scholljegerdes
- Malone Farms Endowed Staff Award-Off Campus, Joshua Trujillo
- Mobley Family endowed Research Award, Sangu Angadi
- Charles Tharp Farms Distinguished Service Award, David DuBois
- Distinguished Staff Award-On Campus, Carolina Torres
- NACTA Teaching Award, R.G. “Tre” Easterly
- Distinguished Cooperative Extension Service Award, Teresa Dean
- Distinguished County Agent Award, Shannon Wooton
- Distinguished Professional Staff Award-On Campus, Misty Haynes
- Distinguished Professional Staff Award-Off Campus, Anthony Aranda
- Team Award, NM Indian Livestock Day Team

Awardees selected by the Departments:

- Outstanding 4-H Agent Award, Ryan Craig
- HRTM Industry Leadership Award, Tom Hutchinson
- FCS Industry Leadership Award, Mary Ellen McKay
- Outstanding FACS Teacher, Linda Ortiz
- Outstanding Ag Teacher, Monty Avery

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Faculty Spotlight: Brian Schutte

» MELISSA R. RUTTER

Q: How did you become interested in Horticulture and Crop Science? I became interested in Horticulture and Crop Science after taking an introductory botany class as an undergraduate at Miami University. Although I begrudgingly enrolled in the botany course to fulfill a general education requirement for my political science degree, the material was so interesting that this course became the beginning of my career in plant sciences.

Q: What has been your proudest professional achievement? I am most proud of establishing a laboratory at NMSU that allows students to apply and further develop their talents while they discover new knowledge on weed biology and weed management.

Q: What is the most rewarding aspect of your profession? Learning. I love to learn new ideas in agriculture and new techniques in teaching.

Q: Please tell us a little about your interest in weed physiology and ecology?

I study agricultural weeds to develop new management strategies that reduce reliance on herbicides and/or hand labor, thereby making crop production systems more profitable for farmers, less threatening to non-target organisms and less likely to support herbicide-resistant weeds. Effective and environmentally responsible weed management tactics require knowledge of the fundamental factors contributing to the success of weeds in the particular agricultural system. Accordingly, I study mechanisms of weed persistence and spread. These studies in basic research are complemented with applied research projects that address the immediate weed control needs of farmers in New Mexico. By combining insights from my basic and applied research endeavors, I try to develop weed management strategies that are readily adoptable and founded on principles of plant ecology.



Brian Schutte, professor of Entomology, Plant Pathology and Weed Science after receiving the Donald C. Roush Excellence in Teaching Award, during New Mexico State University's 2018 Spring Convocation ceremony at the Atkinson Recital Hall. (NMSU photo by Andres Leighton)