NMSU science center in Alcalde captures bee diversity in New Mexico
Dear Aggies,

Welcome! We are back in session after many months of working, teaching and learning remotely. We are still facing challenges related to the COVID-19 pandemic, but this time, we can draw on our experiences from the past year — and use our Aggie spirit — to forge ahead with our academic, research, outreach and extension work.

Despite the challenges, there is a lot to celebrate in the College of ACES. This summer, construction began on the first phase of NMSU’s Agricultural Modernization and Educational Facilities project, and we celebrated the occasion with a groundbreaking ceremony in August. You can read more about this project in this issue of ACES Magazine.

In addition, we hope you will enjoy learning about other new activities in our college. For example, the Department of Family and Consumer Sciences launched the Center of Innovation for Behavioral Health and Wellbeing. At the college level, we established the ACES Equity, Diversity and Inclusion Program to attract and retain employees and students from diverse backgrounds and reach diverse communities throughout the state.

For the first time, we are including a student section – Faces of ACES – produced by students from the ACES Agricultural and Scientific Publications course in the Department of Agricultural and Extension Education, under the supervision of Dr. Shannon Norris. We hope to feature students’ work once a year.

Enjoy our sixth issue of ACES Magazine. Go Aggies!

Rolando A. Flores Galarza
Dean and Chief Administrative Officer
New center at NMSU aims to improve behavioral health care in New Mexico

BY JAMES STALEY

Support from Beginning to End

Strengthening a comprehensive system of care throughout a vast and diverse state like New Mexico is no small task. But that’s the mission of a new NMSU institution.

The Center of Innovation for Behavioral Health and Wellbeing, or COI, at NMSU may be new, but its roots run deep. Housed in the NMSU Cooperative Extension Service and the Extension Family and Consumer Sciences Department, COI will provide foundational support for New Mexico children and families – something that has been happening for several years, but at a much smaller scale.

“That means organizing trainings, executing conferences, implementing programs and much more,” said Brooke Stanley Tou, COI director. “We’re looking at practice improvement. We’re looking at supporting community-based programs to thrive. A lot of that comes back to training, but it’s also coaching and mentoring programs, outreach and community awareness.”

New Mexico’s behavioral health care system is stretched thin. According to Mental Health America, a nonprofit, New Mexico ranks 42nd in behavioral health care for youth, indicating they have a higher prevalence of mental illness and lower rates of access to care.

In the past decade, the state’s mental health care system faced external challenges that made it difficult for people to get services. About 55 percent of those in need of mental health care in New Mexico do not receive treatment, according to federal data.

Stanley Tou envisions COI serving as a “training hub and workforce development center” to bolster the state’s system, specifically for those under 21. That would include adding qualified providers – crucial in a system with waiting lists – and allowing existing providers to focus more on patients rather than organizing trainings and other support systems.

“One thing that we’ve learned is that you can’t just throw training at groups,” Stanley Tou said. “You need to support them over time. We support them from beginning to end.”

Initially, the state’s Children, Youth and Families Department will serve as the center’s primary funding source. It’s a natural pairing because many COI staff members have worked with CYFD for years. It was a smaller, less formal version of COI with NMSU organizing trainings, conferences and programs on a single-contract basis.

For several years, COI was known as the Southwest Regional Training Center. That generic name was problematic, said Robert Moreno, head of the Family and Consumer Sciences Department and the Extension Family and Consumer Sciences Department. “When Moreno arrived at NMSU in 2019, he suggested rebranding so that more people would understand the center’s role. “It helps identify us as being one of the leaders in the state for child development and, broadly, family well-being,” he said.

Stanley Tou and others on her staff have backgrounds in social work and public health, and COI itself combines social work principles with a public health implementation style.

Stanley Tou said COI plans to work with state partners to transition some of the state’s core services to become Medicaid billable, further strengthening the system. Eventually, the plan is to make COI a self-funded entity within NMSU, providing training and program implementation support across New Mexico’s child-serving systems.
A WELCOMING SPACE
New program seeks to strengthen equity, diversity and inclusion efforts in ACES

BY CARLOS ANDRES LÓPEZ

A s part of its commitment to pro-
moting equity, diversity and inclu-
sion across its academic, research, outreach and Extension missions, the College of ACES launched a new initiative to lead a coordinated effort to attract and re-
tain faculty, staff and students from diverse backgrounds and reach diverse communities throughout the state.

Efforts to create the ACES Equity, Diversity and Inclusion Program began last year to strengthen the college’s ex-
isting work to create open and inclusive environments for students, employees and stakeholders statewide. In August, ACES Dean Rolando A. Flores Galarza appointed two ACES faculty members, Laura Bittner and Karim Martinez, as co-directors of the initiative.

“We all have the privilege to serve the diverse state of New Mexico and contribute to its economic and social development. Understanding the issues associated with
equity, diversity and inclusion and estab-
lishing honest conversations on the subject will make our college much better and more effective,” Flores Galarza said.

Bittner and Martinez bring many years of experience working with underserved and underrepresented communities to their new roles.

In her former role as a county director with the NMSU Cooperative Extension Service, Bittner developed programming to reach and engage underserved audiences. In her current role as interim department head of the 4-H Youth Development, Bittner seeks to expand opportunities for underrepresented youth audiences throughout New Mexico.

Martinez, an Extension family life and child development specialist, has spent much of her career providing outreach ser-
vices to minority and underserved popula-
tions in southern border communities.

Bittner and Martinez, who share a mutual admiration for one another, decided to apply as a team to lead the new program.

“We work very well together and have great respect for one another,” Bittner said, “and we approach our work with the same passion.”

Martinez agreed, adding that she and Bittner make a “solid team.”

“These are challenging topics, espe-
cially in the context of the past year, which brought to light many difficult issues,” Mar-
tinez said. “It’s beneficial working as a team and having someone to talk through ideas of how to support our college in better serving the needs of our constituents, whether that’s students, faculty, staff or the community.”

Bittner and Martinez will maintain their other roles in ACES while carrying out their responsibilities as co-directors of the new program. Their duties now include co-
ordinating and managing strategic activities related to equity, diversity and inclusion on behalf of ACES while serving as a liaison to related campus-wide initiatives. They will also work with the university’s new diversity leader, Teresa Maria Linda Schola.

Martinez believes their efforts will ulti-
mately enhance student success and social mobility – the first goal in NMSU’s strategic plan, LEADS 2025.

“I’m excited about having conversa-
tions that create more understanding,” she said, “and coming together to learn from each other and creating an equitable and inclusive environment not just here on cam-
pus but at our research and Extension offices across the state.”

Additionally, they will collaborate with ACES unit leaders and the dean’s office to develop a strategic plan to promote equity, diversity and inclusion throughout the col-
lege’s academic departments, the Cooper-
ative Extension Service and the Agricultural Experiment Station.

Bittner and Martinez have started meeting with department heads to discuss ongoing efforts to support diversity in ACES.

“A number of us in the college have been working to promote equity, diversity and inclusion, but sometimes we may feel like we are doing this work in isolation,” Martinez said. “In our new roles, we’ll have the opportunity to identify and highlight successful efforts in this area in order to amplify and replicate it within the college. I think being more intentional about EDI efforts and working more collaboratively will help us reach our goals more effectively.”

Bittner said one of her goals is to ensure ACES students, faculty and staff throughout the state feel welcomed and supported during their time at NMSU.

Martinez believes their efforts will ulti-
mately enhance student success and social mobility – the first goal in NMSU’s strategic plan, LEADS 2025.

“I’m excited about having conver-
sations that create more understanding,” she said, “and coming together to learn from each other and creating an equitable and inclusive environment not just here on cam-
pus but at our research and Extension offices across the state.”

The College of ACES remains committed to fostering a welcoming and supportive environment for all students, staff and faculty members across its academic departments, the Cooperative Extension Service, ACES New Mexico. Flores Galarza established the ACES Equity, Diversity and Inclusion Program to attract and retain employees and students from diverse backgrounds and reach diverse communities throughout the state.

New Mexico State University | ACES Magazine | Fall 2021

Fall 2021 | ACES Magazine | New Mexico State University | 5
ACEs dean wins lifetime achievement award from national STEM organization

College of ACES Dean Rolando A. Flores Galarrza was among 22 STEM professionals selected to receive the 2021 HENAAC Awards from Great Minds in STEM. Flores Galarrza received a lifetime achievement award for education.

"This award humbles and fills me with gratitude for all the students, who in one way or another, I have contributed to moving them through the education process," he said. "I am grateful to my beloved family for their patience, support and love, to all the colleagues and staff I have worked with, and to the ones who nominated me. Education is fundamental to the growth of an individual, and without it, our society will not move forward. I have been blessed to have the opportunity to contribute to this rich endeavor."

Flores Galarrza and other award winners were recognized at the 2021 Great Minds in STEM conference in October.

Alumnus takes helm of NMSU rodeo team as head coach

Brice Baggarley took the helm of the NMSU rodeo team earlier this year, inheriting a team that faced unprecedented challenges over the past year, but completed the 2020-2021 season with a string of victories.

The women’s team finished first in the Grand Canyon Region standings while the men’s team finished fourth. Ten students also qualified for the College National Finals Rodeo in June. Five students – all from the women’s team – placed in individual contests. The women’s team finished the finals in 21st place overall.

Baggarley’s priorities as head coach include rebuilding community relationships, fundraising, and hosting two college rodeos, including the regional finals in April 2022.

ACEs students vie in national agricultural marketing, sales competitions

A team of 19 ACEs undergraduates achieved success on a national stage this spring after placing in competitions sponsored by the National Agri-Marketing Association. The students competed in the Student NAMA Marketing Competition and the Student NAMA Sales Competition in April.

The entire ACEs team took second place in the marketing competition, outperforming teams from Iowa State University, University of Missouri, University of Tennessee and Kansas State University in the final round of competition. Chaddy Robinson, ACEs assistant professor, served as the coach for the marketing team.

ACEs students Savannah Dimas and Paden McDermid participated in the sales competition, and McDermid made it to the finals, placing in the top eight. Nellie Hill, ACEs assistant professor, served as the sales team coach.

Fashion Merchandising and Design hosts Aggies Fashion Camp for high-schoolers

The ACEs Fashion Merchandising and Design program invited high school students to learn about the fashion and textile industry during a one-day camp in July. Students from Las Cruces, Deming, Santa Fe and El Paso participated in the first-ever Aggies Fashion Camp, organized by ACEs faculty members Insook Ahn and Kelley Cleary Coffeen.

"Our camp gave students interested in design, product development, retail and textiles and brand-building a chance to explore the opportunities in the fashion industry," Coffeen said.

Ahn added, "Students received firsthand experience in creating their designs through creative workshops and projects. We provided advice and feedback to the students, so they would be able to improve their work and build confidence." The camp will return for a second year in 2022.

ACEs students collaborate on artisan rug for NMSU Heritage Wool Project

The NMSU Heritage Wool Project, led by ACEs faculty members Jennifer Hernandez Gifford and Kelley Cleary Coffeen, brings together students and faculty in two ACEs departments to highlight the history and importance of the wool sheep industry in New Mexico.

For the project’s first collaboration, Hernandez Gifford’s students in Animal and Range Sciences sheared NMSU’s flock of Rambouillet sheep and prepared about 1,000 pounds of fleece for processing into custom-dyed yarn. Students in the Fashion Merchandising and Design program learned how to manage a collaborative textile design project and worked with Richard Trujillo, an ACEs alumni and master weaver in Chimayé, New Mexico, who used the yarn to create a uniquely woven rug celebrating New Mexico’s culture and NMSU’s legacy.

The rug is on display in the main entrance of Gerald Thomas Hall. Follow the NMSU West Sheep Unit on Facebook for updates about learning opportunities to purchase a limited-edition NMSU wool blanket.

ACEs researcher contributes to study tracking weasel declines in US, Canada

A study co-authored by an ACEs researcher suggests three weasel species once common across much of the United States and Canada are now in decline.

The study – conducted by a team of researchers based in the U.S., including Matthew Gompper, professor and head of the Department of Fish, Wildlife and Conservation Ecology – centered on the status of the least weasel, long-tailed weasels and ermine weasels.

Gompper and the research team found that fur trapper harvest of weasels declined in 15 out of the 22 states and provinces analyzed for the study, with the extent of these declines approaching 75 percent to 95 percent. Their data also showed a dramatic drop in sightings of long-tailed weasels since 2000 in some parts of its range.
The NMSU Cooperative Extension Service has an irreplaceable connection to communities throughout New Mexico. And the COVID-19 pandemic highlighted the need to reach as many people as possible.

In April, CES received a one-year grant to promote COVID-19 vaccine education through relevant messaging and innovative models for community action. The immunization education project called Extension Collaborative Immunization Training and Engagement, or EXCITE, is funded through the Centers for Disease Control and Prevention’s Vaccinate with Confidence communication campaign.

“COVID has forced us to come together because we need everybody at the table,” said Sonja Koukel, professor and Extension health specialist. “Extension is being asked at the national level to be a partner in providing these types of resources. We’re the people who are in every county, and we’re the trusted voice, so we need to be there.”

NMSU and the New Mexico Department of Health are collaborating on effective messaging and connecting with targeted audiences.

“Working with the NMSU College of ACES/Extension through the EXCITE project has been rewarding,” said John E. Kutinac, NMDOH health promotion program manager for the New Mexico Department of Health; Sonja Koukel, ACES professor and Extension health specialist; and Tom Dean, director of the Southwest Extension District.
Derek Bailey and his research team track cattle behavior with GPS technology

BY CASSIE MCCLURE

A Corriente cow, standing behind a calf, wears accelerometer ear tags at Deep Well Ranch in Arizona.

The two-year, $200,000-funded NMSU Essential Workers in Agriculture Health Project builds on the vaccination program delivered through the partnership with the NMDOH and New Mexico dairy producers. Plans include expanding the program to farmworkers via farm producers and proprietors in four southwest counties: Doña Ana, Luna, Socorro, and Grant. The pilot project may include but is not specific to COVID-19. The focus is on the importance of immunizations across the spectrum, Koukel said.

“This collaboration has truly been invaluable as we continue to live in a world with COVID-19 and work to eradicate this virus,” Kutinac said. “The gains we have had would not have been possible without working collaboratively with New Mexico State University. I am proud to be an NMSU Aggie and work with such an amazing team.”

Koukel, standing, assists community health workers Rosa Trujillo, center, and Lizeth Carrillo during a mobile vaccination clinic in May. The EXCITE project aims to improve accessibility and acceptability of local vaccination clinics and opportunities to reduce health disparities.

Krystal Pouliot, left, and Gloria Martinez, registered nurses with the New Mexico Department of Health, prepare COVID-19 vaccines for a mobile vaccination clinic conducted at a dairy farm in Doña Ana County.

program manager. “Extension plays such an important role in educating and linking our communities to resources. Collaborating, sharing resources and working as a team is essential to reaching all corners of our diverse population here in New Mexico. I am looking forward to our partnership and collaboration as we work together to address COVID-19 and improve the overall health of our community.”

The NMSU team includes members from the Family and Consumer Sciences Department as well as agricultural industry personnel and producers. EXCITE aims to improve accessibility and acceptability of local vaccination clinics and opportunities to reduce health disparities, especially in rural areas, Koukel said.

CES and NMDOH teamed up to offer mobile vaccination clinics to dairy producers and workers, an industry that includes approximately 127 producers who employ 6,000 workers. Counties targeted include Doña Ana, Luna, Socorro, Roosevelt, Curry, Chavez, Lea and Eddy.

NMDOH conducted the voluntary COVID-19 vaccinations for workers and their family members who wanted to receive the vaccine. Robert Hagevoort, associate professor and Extension dairy specialist, and CES staff helped coordinate the mobile vaccination clinics, the first of which took place in May at a dairy farm in Doña Ana County. "One of the reasons that I contacted Robert is because he had already seen the connection between agricultural workers and health," Koukel said. “With the NMDOH wanting to reach at-risk and underserved audiences, they were excited to go out to the dairies as well because that's a population that generally doesn't get served.”

Hagevoort said the team was prepared to conduct additional mobile clinics this summer and will be ready to facilitate if needed in late 2021 and early 2022. He hopes the established collaborations can lead to mobile clinics providing regular health checks for agriculture workers, who are often foreign-born and don’t seek assistance.

"I think it's huge in agriculture that we can at least offer that first safe haven where they can feel comfortable and go in and ask questions," Hagevoort said. "At the end of the day, these businesses want healthy workers. Healthy workers perform a good job.”

NMSU also received a second grant for “EXCITE Activity 2” through the U.S. Department of Agriculture’s National Institute of Food and Agriculture in partnership with the CDC and Extension Foundation. The two-year, $200,000-funded NMSU Essential Workers in Agriculture Health Project builds on the vaccination program delivered through the partnership with the NMDOH and New Mexico dairy producers. Plans include expanding the program to farmworkers via farm producers and proprietors in four southwest counties: Doña Ana, Luna, Socorro and Grant. The pilot project may include but is not specific to COVID-19. The focus is on the importance of immunizations across the spectrum, Koukel said.

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‘FITBIT FOR COWS’

Derek Bailey and his research team track cattle behavior with GPS technology

BY CASSIE MCCLURE

A Corriente cow, standing behind a calf, wears accelerometer ear tags at Deep Well Ranch in Arizona.
When Derek Bailey was a child in southern Colorado, he was intrigued by cattle that would climb the steep slopes on his family’s ranch while all the other cattle grazed below.

“It was steep, mountainous terrain, so cows were down in the bottoms and overgrazed it. But there were always ones that found their way up,” Bailey said. “My dad would be mad because we had to go get them. But I thought those cattle were great – adventurous, fat and happy – and grazing on a ton of grasses.”

As a professor of range science in the College of ACES, Bailey investigates the behavior of cows, including how to keep cows sustainably grazing throughout the country. Since 2017, Bailey and his research team have used technologies, including GPS, to monitor animal welfare at the Deep Well Ranch in Yavapai County, Arizona, thanks to the support of the Harold James Family Trust.

“They’re tickled that we’re doing this high-tech research because it has real benefits to ranchers, and it helps with their ranch’s sustainability,” he said. “My whole research focuses on ways to manipulate cattle to avoid overgrazing in sensitive areas – like riparian areas and streams – and utilize the steeper, rougher country that cattle typically avoid so they can spread out and take advantage of the forage.”

Bailey and his research team use GPS tracking and accelerometers to monitor cattle activity and changes in normal behavior.

“Cows normally have a pattern,” Bailey said. “They go in and get a drink and then walk off and lay down. But if they stay there, they’re waiting for the water, (and) they’re frustrated for some reason. Since I grew up on a ranch, I know that if you see cattle gathered together next to a water tank, it’s not a good sign.”

Research at Deep Well Ranch has demonstrated that tracking cattle with GPS receivers could identify water system failures. “With the technology, even with wide distances, ranchers could see the same behavior with real-time tracking and software that could say something’s wrong by sending a text or email message to the rancher,” he said.

Monitoring livestock on horseback is labor intensive and challenging, Bailey added. “It’s hard to monitor cattle and sheep on rangelands; it’s such a large distance. There are lots of times you won’t see them,” he said. “By remotely monitoring for their well-being, it helps ranchers treat livestock sooner, improve productivity and lower labor costs.”

In addition to his work in Arizona, Bailey has also conducted collaborative research in Australia and found that monitoring behavior with accelerometers could detect diseases like bovine ephemeral fever.

For Bailey, his research goes back to the individualistic nature of cows he witnessed when he was younger and the lingering question: Why would some cows have the ability to climb through more arid terrain to find food, and others won’t?

“Genetic selection may be a powerful tool to resolve grazing distribution concerns if we can identify and verify the genes that cause some cows to keep going and others to stay in one area,” he said.
The first phase of the Agricultural Modernization and Educational Facilities project will include the construction of a biomedical research center, an animal institute and feed manufacturing facility, and a food science, security and safety facility. The last major facility added to NMSU’s agricultural district, Skeen Hall, was completed in 1999.

Construction begins on Agricultural Modernization and Educational Facilities project

BY AMANDA BRADFORD
A sheep ready for pets and photos.

The NMSU Las Cruces campus is unique among American collegiate campuses in that its agricultural district, which is approximately 164 acres in size, is adjacent to the campus core. The last major facility added to the agricultural district was Skeen Hall, constructed in 1999 as the Center for Sustainable Development of Arid Lands.

The $43 million allocated to NMSU over the two bond cycles represents the largest-ever single capital project investment in the university by the state of New Mexico. Even so, the state funding falls short of the total planned cost of the completed project. To bridge the gap, the NMSU Foundation has launched a $10 million fundraising campaign to support construction, furnishings and equipment to complete the facilities.

“This marks an exciting milestone for NMSU, the College of ACES and New Mexico’s agriculture industry,” ACES Dean Rolando A. Flores Galarza said. “These new facilities will lead to growth in research, teaching, outreach and service that will benefit all New Mexicans and allow us to continue the outstanding NMSU tradition of land-grant mission exemplified by the work of Fabián García early last century.”

The project’s first phase will focus on the construction of a biomedical research center; an animal nutrition and feed manufacturing facility; and a food science, security and safety facility.

The NMSU Board of Regents, Chancellor Dan Arvizu, President John Floros, NMSU Foundation President Devise Dictson and a group of ACES faculty members help ACES Dean Rolando A. Flores Galarza break ground on the first phase of the Agricultural Modernization and Educational Facilities project in August.  

The gathering, under a cloudless blue sky, kicked off the first phase of NMSU’s Agricultural Modernization and Educational Facilities project, approved by New Mexico voters through general obligation bonds in 2018. Voters approved the project’s second phase in 2020.

Construction work on the two-phase project got underway in June. It includes the construction and modernization of facilities that support human health and biomedical research; student learning and public outreach; and food security and animal production efficiency.

“I want to say a big thank-you to the citizens of New Mexico, who recognized the importance and potential impact of the work that will take place in these facilities once they come online,” NMSU Board of Regents Chair Ammu Devasthali said. “Being a land-grant university, any research that is done at NMSU fulfills not only its mission as an institution of higher learning, but also extends the fruits of our research out into every corner of our state – and beyond – to benefit the community at large.”

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The project’s first phase will focus on the construction of a biomedical research center; an animal nutrition and feed manufacturing facility; and a food science, security and safety facility.

The biomedical research center will serve researchers in three colleges and seven departments. It will increase NMSU’s capacity to conduct research that will attract more grants from the National Institutes of Health, U.S. Department of Agriculture and National Science Foundation. It will also boost the opportunity for interdisciplinary collaboration between researchers and students in the colleges of ACES, Arts and Sciences, and Health, Education and Social Transformation.

The animal nutrition and feed manufacturing facility will provide students, researchers and industry stakeholders an opportunity to investigate the use of new feedstuffs and processing methods to improve livestock health and productivity.

The food science, security and safety facility will become an international hub in the border region, housing facilities and pilot plants to process meats and meat byproducts and labs to support emerging research areas like functional foods, nutraceuticals and minimizing water usage in food production. The facility will enhance opportunities for industry partnerships and create an additional revenue stream for the university through the services it will provide.

NMSU Chancellor Dan Arvizu expressed excitement at the long-term benefits the new facilities will bring to the economy of the state, in addition to the educational opportunities they will provide.

GET INVOLVED

For more information about the $10 million fundraising campaign to support the Agricultural Modernization and Educational Facilities project, visit nmsufoundation.org.
After earning a Ph.D. in plant and environmental sciences from NMSU in 2009, participating in a postdoc research fellowship at North Carolina State University and teaching at community colleges, Ivette Guzman knew she wanted to return to NMSU to teach and mentor students in research. Guzman’s innovative teaching style, especially after the COVID-19 pandemic began in March 2020, has earned her kudos. This past spring, Guzman received the Truly Innovative Teaching Award from the NMSU Teaching Academy. But Guzman thinks of her teaching methods and philosophy as a way of best earning her students’ attention, rather than attention from her peers.

“I had a great experience here at NMSU (as a student). I had great faculty and mentors, and I knew that if I wanted to teach, I wanted to teach here,” she said. Guzman began teaching in the Department of Plant and Environmental Sciences in 2016. Since then, she’s taught introductory plant sciences, crop physiology, and vegetable production and medicinal herb courses. Guzman first taught the introductory plant sciences course in the Gerald Thomas Hall auditorium, but quickly found it difficult for lecturing.

“I try to promote a lot of group learning and peer-to-peer interaction, and it was hard to do that in the auditorium,” she said. “Most classrooms are planned out so that there’s a division between faculty and students, and students aren’t even looking at each other. I just got tired of teaching that way.”

Guzman moved her class to the Harman and Jacobs Undergraduate Learning Center’s Technology-Enhanced Active Learning classroom, a high-tech learning environment equipped with round tables and laptops.

“I noticed students could write on the walls, sit in round tables and look at each other. There were so many tools that I could use for them to interact,” she said. She started formatting her classes to adapt to the building’s technology and explored ways to promote interaction among students. On some days, Guzman didn’t lecture at all, allowing students to instead work with one another on activities related to the course curriculum. Guzman again adapted her courses last year when instruction moved fully online due to the pandemic. She created a system based on 1,000 points and a variety of assignments worth a certain number of points. She then allowed her students to pick whatever assignments interested them while still learning about the course subject. She also created a Zoom coffee chat time with individual students, giving them a chance to talk to her about whatever they wanted.

“I taught this class, one that is so interactive, and had to make it 100 percent online. That was tough,” she said. “Fully online is interesting and still doable, and I think my students got something out of it.” Without the Teaching Academy, Guzman said she would have had a difficult time making the transition.

“The Teaching Academy is so supportive of everything we do,” she said. “They really show you that you can do minor changes in your class and curriculum that are still very impactful.”

Guzman’s research areas include vegetable physiology and biochemistry, nutraceutical and functional foods, food systems, and organic vegetable production.
At the NMSU Sustainable Agriculture Science Center in Alcalde, New Mexico, research is underway to study the state’s native bee populations.

ABUZZ WITH NATIVE BEES

Adrienne Rosenberg embarks on a quest to capture bee diversity in New Mexico from the NMSU Sustainable Agriculture Science Center

BY ADRIANA M. CHÁVEZ
Adrienne Rosenberg started her native bee research in 2019. She believes her project will contribute to a better understanding of bees living in New Mexico and their preferred habitat in northern New Mexico.

Rosenberg may have preliminary findings next year or in 2023. She hopes her research raises awareness and solutions for farmers and landowners in creating habitats for native bees. Her larger vision is to associate native pollinator habitat restoration with acequia-rights conservation.

There are more than 4,000 bee species in the United States and about 1,000 bee species in New Mexico due to the state’s diverse landscapes. But native bees aren’t the subject of much research in New Mexico compared to the more well-known honeybee. Adrienne Rosenberg of the NMSU Sustainable Agriculture Science Center in Alcalde, New Mexico, is working on research to change that. Currently, Rosenberg is studying the state’s native bee populations by comparing a native wildflower field to an alfalfa field, a more traditional ground-cover and cash crop in New Mexico. By studying the native bee populations in both areas, Rosenberg is measuring the diversity of the bees.

Because of the presence of well-vegetated watersheds fed by acequias, desert landscapes and small farms, northern New Mexico has plenty of unique bee habitats to research, Rosenberg said.

Rosenberg’s project is not only assessing the diversity of bee species in New Mexico, it could also potentially help with the conservation of acequia rights. Rosenberg also hopes to create a demonstration site and establish easy planting methods that may invite native pollinators and help farmers maintain a constant source of pollinators.

“Every species nesting bee in New Mexico, and one of those reasons is sandy soil is more suitable for solitary nesting bees,” Rosenberg said. “About 70 percent of the bee species are ground-nesting bees.”

Most undomesticated bees—generally considered beneficial insects—are under constant threat due to climate change and increased use of pesticides. Their habitats also are in jeopardy because of habitat fragmentation due to land development.

Pesticides also are a major threat. According to the Xerces Society, pollination is at risk from habitat loss, pesticide use and introduced diseases.

“Often, you can’t control a lot of what happens. You’re at the whim of weather and the seasons,” Rosenberg said. “Fortunately, when COVID hit, I had the support of my colleagues who helped a lot when it came to maintaining the plots.”

Rosenberg hopes her research project raises awareness and solutions for New Mexico farmers and landowners in creating habitats for native bees. Her larger vision, she said, is to associate native pollinator habitat restoration with acequia-rights conservation.

For a guide to native bees in New Mexico, visit bit.ly/38vNKRD
The Jose Fernandez Garden at NMSU grows uncommon vegetables such as bitter melons and celtuce, an edible plant related to lettuce.

TASTE TEST

Jose Fernandez Garden blooms with uncommon vegetables used in food distribution program

BY TIFFANY ACOSTA
hot summer days and the long season we have down here.”

Tonnessen has since left NMSU, but Stephanie Walker, Extension vegetable specialist, is continuing the program.

Vegetables grown in the garden include cucumbers, summer squash, bitter melons, okra and celtuce, an edible plant related to lettuce. After harvesting the crops, CES staff weigh, measure and photograph the vegetables before sharing with community members via a public produce distribution program that launched this past summer.

Tonnessen was pleased with the interest in the garden’s uncommon vegetable and said more than 100 people signed up for the 30 available slots in the distribution program. CES staff distributed the free produce at the Fabian Garcia Science Center.

Community members who received the free produce boxes were asked to complete online questionnaires to provide feedback about the vegetables. They shared their thoughts on how the produce tasted, how they prepared the vegetables, and how they liked the contents of the boxes.

“We use that as data to include with all the measurements to show what would be best, but also what varieties people like,” he said. “We end up with good recommendations for potential alternative crops for farmers and gardeners to try out, as there could be a market out there for it.”

Tonnessen added the community members’ willingness to try new vegetables and expand their palates made for a very positive experience.

The Jose Fernandez Garden had its first harvest in summer 2020, but with COVID-19 restrictions, a public distribution wasn’t possible, and CES staff donated the crops to the Animal and Range Sciences Department.

In addition to the vegetable variety trials, the garden has a seed-saving component and is experimenting with regenerative agriculture. Working with integrated pest management specialists, CES staff planted native wildflowers in border rows to attract pollinators and beneficial insects that will prey upon pests.

“We’re preparing the place for a lot of different types of research to go on and to make it a nice space for people to visit,” Tonnessen said.
Pramod Acharya, a plant and environmental sciences graduate student, measures carbon dioxide and nitrous oxide emissions at a research field.

Rajan Ghimire

Mario Allegri hails from Uruguay, but four decades ago, he called the College of ACES home. Allegri developed a deep connection to the ACES community as a range ecology student and maintained close ties to the college even after graduating in 1974.

Today, Allegri works with ACES Dean Rolando A. Flores Galarza and faculty members to expand the ACES footprint globally. Central to their mission is strengthening overall scientific-technological cooperation throughout Latin America and the Caribbean.

“At the present time, the collaboration works to identify relevant common areas in teaching, research and Extension,” he said. So far, Allegri said, their efforts have resulted in NMSU forming new partnerships with public and private organizations in Argentina, Paraguay and Uruguay. Specifically, NMSU has signed a memorandum of understanding with the Inter-American Institute for Cooperation on Agriculture, IICA, a specialized agriculture agency for the Inter-American System, supports efforts from more than 30 member-states, including the United States, to achieve agricultural development and rural well-being. Through the agreement, NMSU engages with IICA in ongoing meetings, dialogues and discussions to further artificial intelligence in agriculture interactions and collaborative efforts in academics, research and Extension.

“We share objectives of common interest, recognizing the benefit of mutual collaboration, and established areas of cooperation and mechanisms to develop joint activities,” Allegri said. “Areas of cooperation include technology, innovation and rural Extension, and we are focusing on cutting-edge technologies, such as digital agriculture on family farming.”

The overall goal, Allegri said, is to contribute to sustainable development through Latin America and the Caribbean. The initiative reconnects ACES and NMSU alumni to amplify the impact of NMSU globally and benefits ACES students and faculty through research opportunities, including internships. These research programs will ultimately benefit New Mexico farmers and ranchers, he added.

“We are delighted to have a distinguished ACES alumnus as one of our esteemed collaborators,” Flores Galarza said. “His work assisting us in expanding outreach beyond the United States borders is benefiting faculty and students. His connections in LAC countries are critical to attract students to NMSU and promote economic development to benefit New Mexico’s agriculture industry.”

For Allegri, the effort also allows him to work closely with the college he greatly admired as a graduate student.

“These projects represent an opportunity for me to come back to ACES, with a personal commitment to NMSU,” he said. “ACES contributed significantly to my professional career and reinforced my dedication to agricultural research and focus on sustainable development.”

Allegri said ACES must develop international connections as agricultural research, Extension and education face the need to transform. Problems are becoming increasingly complex and interconnected, he explained, and solutions will require collaboration.

“The great challenge of our time is to build sustainable development and address global problems we cannot solve in isolation,” he said. “The current pandemic has reinforced the need to see ourselves interrelated globally as a whole.”

BY CARLOS ANDRES LÓPEZ

Alumnus Mario Allegri helps expand ACES footprint into Latin America, Caribbean

ARGENTINA

URUGUAY

PARAGUAY

Fall 2021  |  ACES Magazine  |  New Mexico State University  | 29  28  |  New Mexico State University  |  ACES Magazine  |  Fall 2021

ACES alumnus Mario Allegri is part of new initiative to further the ACES footprint globally and strengthen overall scientific-technological cooperation throughout Latin America and the Caribbean.
Ryan Perry, a 1999 graduate of NMSU, was elected president of the Sam Steel Society Council earlier this year. Perry has been involved in the council since its inception in 1997 and served on the executive board in 2016. Perry, who graduated from NMSU with a degree in agricultural and extension education and a minor in animal science, currently operates Suther Southwest, a range-cattle nutrition company.

“I am very excited for the opportunity to serve as president and lead the council during this unique time in our history,” Perry said. “Our council has great plans to engage alumni, assist graduating seniors in finding gainful employment and recruit new Aggies to the most outstanding land-grant university in the U.S.”

The Sam Steel Society Council assists the College of ACES through student recruitment, increasing internship and employment opportunities, public relations advocacy, cultivating political influence, and seeking partnerships that support the college through private donations and gifts. Perry is a native of Roswell, New Mexico, and has experience in commercial cattle feeding and environmental compliance. Perry credits the college for the positive outcomes he has experienced professionally and personally.

“The foundations taught and the network established during my tenure continue to serve me well today,” he said. “I am very proud to have been elected president of the Sam Steel Society, and I look forward to serving students, alumni and faculty as we tackle the challenges and opportunities in front of us.”

Perry is married to fellow Aggie Shawna Perry, and the couple has five daughters. NO T E S
Students in the ACES Agricultural and Scientific Publications course wrote, designed and produced the following pages for the first-ever student section of ACES Magazine.
The College of ACES has seven departments and one school, each offering unique degree programs. This structure allows students to prepare for diverse, fulfilling careers.

As an ACES alumna, Amanda Fuller leads the way in unconventional career opportunities. After running a small business in high school, Fuller knew she wanted to help small vendors market their products. This desire led her to NMSU, where she received a Bachelor of Science in agricultural economics and agricultural business as well as a Bachelor of Business Administration in management.

"It was about knowing where I could contribute to the big picture," Fuller said. While obtaining a Master of Public Affairs from the University of Missouri, Fuller connected with Vivayic, a remote-based company that develops learning solutions. In 2019, she joined the Vivayic team as a learning designer.

Despite her degrees in the business field, working for Vivayic requires Fuller to be adaptable to the educational needs of clients. Her work now ranges from agriculture to health and wellness and education to manufacturing, allowing her to make a difference in her own way.

"At Vivayic, our mission is to build others’ capacity to do good in the world," Fuller said. "My position allows me to continue making a difference as one part of a larger process."

In June 2020, Fuller moved to Japan when her husband, Daniel, who is a pilot in the U.S. Air Force, was reassigned. Because Vivayic is a remote-based company, Fuller was able to keep and thrive in her job despite the move.

Fuller recognizes the potential of remote work to advance careers like hers. "I hope it will open up companies to hiring the best person for the job regardless of location," Fuller said. "There is so much opportunity to live where you want while still having a job that challenges you and fills your bucket."
The Intercollegiate Floriculture Team highlights the timelessness of flowers by creating beautiful pieces of art that are full of life. Stacy Swope, a senior majoring in agricultural and extension education, joined the floral team as a freshman. She credits her involvement on the floral team for giving her lifelong friends, travel experiences and expanding her knowledge of flowers. – Fisher EasleySmith

Students can connect their love for country and service through NMSU’s Historical ROTC and College of ACES programs. Cadet Jacob Patton, an agricultural economics and agricultural business major with a minor in military science, uses his degree programs to combine his love for the outdoors and the land with educating his troops. – Jacob Sell

The NMSU Sportsman Fishing Club is dedicated to promoting the sport of bass fishing and conservation. Bradley Jones, incoming senior majoring in welding technology, said joining the club was the best decision he made at NMSU. Jones said the club has energized him to finish his degree in order to continue participating in tournaments at the collegiate level. – Marquez Perez & Hannah Burton

The NMSU rodeo team provides opportunities for students to participate in activities that enhance development. Despite unexpected hurdles in the 2020-2021 season, NMSU’s women’s team won the regional standings. Like several ACES students, Jamee Middagh, animal and range sciences student with a minor in equine management, joined the team to pursue a career in rodeo. – McKenzie Frizzell

ACES student involvement highlights

NMSU rodeo team
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Intercollegiate Floriculture Team
The Intercollegiate Floriculture Team highlights the timelessness of flowers by creating beautiful pieces of art that are full of life. Stacy Swope, a senior majoring in agricultural and extension education, joined the floral team as a freshman. She credits her involvement on the floral team for giving her lifelong friends, travel experiences and expanding her knowledge of flowers. – Fisher EasleySmith
Changing classrooms

Tom Dormody’s classroom door closed at NMSU last fall and changed to a classroom with no doors, just fresh air, desert plants and endless miles.

Dormody taught at NMSU for 32 years, serving as a Regents professor, head of the Department of Agricultural and Extension Education and professor. He taught leadership, diffusion of innovations and sustainability courses. He also developed extensive leadership and community outreach research.

“I loved every part of the job,” Dormody said. “I was having fun, so it was a hard, but rewarding, decision to retire.”

Dormody’s passion makes him more than just a teacher; he is a storyteller.

Dormody continues to educate and inspire students in his new role – teaching not from a classroom, but from the backdrop of NMSU’s campus, serving as an interpretive guide for the Friends of Organ Mountains-Desert Peaks.

“(This role) kind of fell in my lap, but it will be new and exciting.”

When the program starts, he will take his new students – visitors to the monument – to fascinating trails and locations like Dripping Springs and Kilbourne Hole, teaching the geology, geography, ecology and history of the monument.

Through storytelling, Dormody strives to provoke creativity and imagination in his students with information on how people in this area lived sustainably.

Dormody’s teachings are no longer bound to Gerald Thomas Hall’s classrooms, but are now free to explore the untold stories of the Organ Mountains, which ceaselessly overlook NMSU’s progress.

Stronger foundations

New Mexico FFA welcomes exciting changes

Gary Aycock is set to reinforce the foundation of the New Mexico FFA Association.

Aycock has been in agricultural education for more than 20 years. His involvement as an educator led him to New Mexico and NMSU, where he serves as the state supervisor of agricultural education, advisor of New Mexico FFA and mentor to NMSU’s future agricultural educators.

Aycock’s roots began in Alabama as an agricultural education teacher, which prepared him to lead the association.

“This transition has been exciting so far,” Aycock said. “We have started to look at new programs for next year.”

New Mexico has approximately 100 agricultural teachers and 80 FFA chapters.

“We look for potential to grow organizations like these,” Aycock said. “New Mexico and its (agricultural) teachers have potential for growth.”

Aycock’s passion for growth targets students and teachers. However, his ideas for developing the association primarily focus on younger members in the state.

The National FFA Organization is structured by student membership levels. These levels provide community for students in different age groups, which is a core value of the FFA. Aycock wishes to provide opportunities for younger members by strengthening Greenhand conferences.

“The development of a Greenhand conference is important for state associations,” Aycock said. “We can initiate this as we grow and develop to find our new normal.”

Greenhand members are in their first year of high school or their first year in FFA. As young and aspiring professionals, Greenhands grow to be impactful students and industry leaders.

Aycock also hopes to increase agricultural teacher recruitment and retention. By building new teacher orientation programs, the association will equip new educators with better resources.

“If we focus on new teachers, we can meet more of that potential to make New Mexico FFA more competitive,” Aycock said.

Building on the foundation of New Mexico agricultural education, Aycock looks forward to the possibilities for growth.

Gary Aycock and 2020-2021 New Mexico FFA State President Brandon Larranaga at an NMSU research farm.

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BY DAKOTA BELCHER

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Gary Aycock and 2020-2021 New Mexico FFA State President Brandon Larranaga at an NMSU research farm.
MSU’s School of Hotel, Restaurant and Tourism Management added a new experience to its program with the first-ever partnership between HRTM and the New Mexico Beef Council.

Though the Beef Council has worked with other faculty and staff in other departments in the College of ACES, the organization began its first partnership with HRTM in summer 2020. Last year, the Beef Council met with HRTM leaders to discuss a collaboration between the production and food industries. The partnership grew, leading to sponsored chef jackets and new books for HRTM students. The Beef Council started giving live demonstrations in spring 2021.

“We’ve been planning (the partnership) for a while, and we’re excited to see it come to fruition,” said HRTM Director Jean Hertzman, Ph.D. “It fits in so much with our strategic plans and the LEADS 2025 goals as far as connecting the university with the community and providing this type of experiential learning for our students.”

The best kind of learning: Hands on
Dina Chacón-Reitzel, executive director of the New Mexico Beef Council and NMSU regent, said the demonstrations will offer students an incredible learning opportunity. In these presentations, students experience lessons related to the beef industry and food handling.

For example, presenters will highlight topics such as primal cuts, specific cuts, marketing those cuts on menus, choices of grades and beef terminology, including grain finished or grass fed. Additionally, students will have the opportunity to learn different cooking methods for beef products.

“We want to provide the best possible education about beef for our students,” Hertzman said. “Beef is such a big part of the agricultural industry and the food service industry, so it is important for students to understand its background and use.”

With an increased emphasis on sustainability, students should be informed about leading practices in the beef industry, Chacón-Reitzel said.

“We want our students to have facts about beef production and sustainable beef production,” she said.

Making a lasting impact on students and the community
While hands-on learning is integral to this partnership, both Chacón-Reitzel and Hertzman said there are more benefits as students will have the opportunity to learn about the industry and make connections with stakeholders — yes, pun intended.

“The mystery of the meat case will be solved,” Chacón-Reitzel said.

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With an increasing amount of misinformation, one goal is to educate students to relay the best possible information to consumers.

“We want our students to understand the support systems available from the Beef Council and similar types of organizations,” Hertzman said. However, it is not just students who will learn from these presentations. “With help from NMSU’s Innovative Media Research and Extension team, each demonstration will be recorded for later use in online HRTM classes, as well as community outreach and Extension services.”

“These recordings are going to promote HRTM and the Beef Council,” Chacón-Reitzel said. “They are a great way to connect consumers with the beef industry.”

A long-term partnership
Faculty, staff and students in HRTM are looking forward to what this partnership will bring in the future.

“We hope to continue these demonstrations and look forward to being able to offer these opportunities for our students,” Hertzman said.

Chacón-Reitzel said she hopes to expand the curriculum. She looks forward to advancing communications with HRTM to continue meeting student needs.

Students will apply information they learn during the beef demonstrations through hands-on immersion in the 100 West Café, a student-run restaurant in Gerald Thomas Hall that provides career application for HRTM coursework.

Students and guests are encouraged to visit 100 West Café to get a look at what HRTM student chefs cook up and serve.