

ACES MAGAZINE

COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES

VOLUME 7 | SPRING 2022



THE PIONEER
FABIÁN GARCÍA

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N Mex. No 9

DEAN'S LETTER

Dear Aggies,

Hello from our Las Cruces campus, where construction is in full swing on a voter-approved project to modernize our agricultural district. It's exciting to see new facilities rising from the ground up.

In this issue of *ACES Magazine*, we are delighted to pay tribute to our historical roots and introduce a new section dedicated to our heroes, starting with Fabián García, who had a tremendous impact on agriculture.

Last October, García was inducted into National Agricultural Center and Hall of Fame, and I had the great privilege to attend the ceremony and celebrate García's latest achievement. The more we understand his legacy, the more we can appreciate his worldwide impact on agriculture. As you read this section, I encourage you to think about García's influence on our college and NMSU and reflect on what we've accomplished since he arrived in Las Cruces with his grandmother in the 1880s.

We will keep García in our minds as we prepare to launch groundbreaking new initiatives in carbon management and digital agriculture – two areas that have incredible implications for the future of agriculture in New Mexico and across the world.

I also want to take this opportunity to thank Natalie Morales, an NMSU studio arts student who created the artwork on our cover, which beautifully captures García's legacy. A special thanks to Jeanne Gleason, whose extensive research helped shape our ACES Heroes section. And thank you to our supporters – your help has allowed ACES to get to where it is today.



Rolando A. Flores Galarza
Dean and Chief Administrative Officer



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SPRING 2022

On the cover

A color-pastel portrait of Fabián García created by NMSU studio arts student Natalie Morales. Read more about the cover on Page 42.



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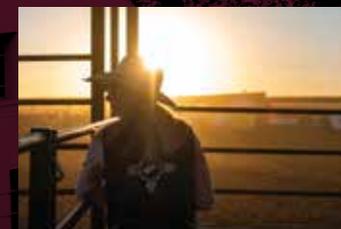
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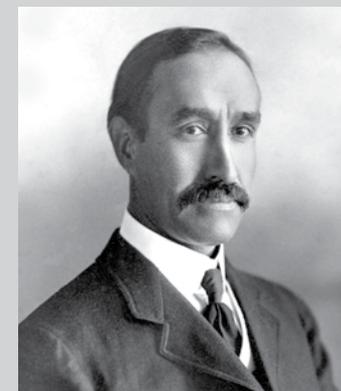
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ACES HEROES

More than a century ago, Fabián García pioneered research at NMSU that transformed the world of agriculture. Read about García's lasting legacy in our new section dedicated to ACES heroes.

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BACK IN ACTION

AES field days return with great fanfare despite pandemic challenges BY ADRIANA M. CHÁVEZ

Agricultural science centers across New Mexico were once again able to host in-person field days in 2021, after the COVID-19 pandemic shuttered the open-house events in 2020.

Many centers had to adapt to state and regional COVID guidelines by hosting hybrid events, but centers that hosted in-person events saw successful turnouts.

“I fail to see how the 2021 field day at the NMSU Rex E. Kirksey Agricultural Science Center could have been more successful,” said Leonard Lauriault, forage crop management scientist and the center’s superintendent. “We had 86 people of all ages and various walks of life in attendance. This event not only provided information to local agricultural producers about the research conducted at the center, but it also acquainted stakeholders not familiar with agriculture with agricultural practices.”

Field days are free and open to the public and often highlight research at each center and feature special presentations and keynote speakers.

Dave Lowry, superintendent of the Leyendecker Plant Science Research Center,



Visitors listen to former NMSU graduate student Ivan Tellez give a research presentation at the Agricultural Science Center at Artesia in August. Science centers across New Mexico held in-person field days in 2021 for the first time since 2019.

Fabián García Science Center and the Chihuahuan Desert Rangeland Research Center, said all three field days near the NMSU main campus in Las Cruces were extremely successful. CDRRC hosted a hybrid event that drew 29 in-person attendees and 15

online participants – 11 of whom tuned in from international locations.

“In the face of the pandemic, and the ever-changing guidance on do’s and don’ts, we were able to host all three in a safe manner and provide as interactive an experience



Clockwise from top left: Livestock at the Clayton Livestock Research Center; Soum Sanogo at the Leyendecker Plant Science Research Center; attendees at the Corona Range and Livestock Research Center; an outdoor presentation at the Agricultural Science Center at Los Lunas; and crops at the Agricultural Science Center at Farmington, which worked with students from San Juan College to create videos for the center’s projects.

as possible,” Lowry said. “Merely reading about research in an article or online, it is easily skimmed over. Being able to bring the public out onsite allows us to engage all the senses and really get those synapses firing by evoking questions and being able to tell the story of the research from start to finish.”

The Agricultural Science Center at Farmington had to adapt its event to meet state and Navajo Nation COVID guidelines, since the center is located on land leased from

the nation. The center had to limit in-person attendance, but came up with a unique way to share the experience virtually.

Kevin Lombard, the center’s superintendent, worked with film and digital media arts students from San Juan College to create videos for each of the center’s projects. They also made a QR code that, when scanned by a smartphone, called up a special Instagram page created just for the center, featuring the videos.

“It worked out great,” Lombard said. “The lasting legacy of our field days will be there for years, as long as we maintain the digital presence.”

Lombard plans to continue using QR codes for flyers and presentations as an outreach tool for those who may not be able to attend the center’s field days.

For more information about field days, visit nmsu.link/field-days.

Students lead cleanup effort to revitalize Knox Hall pond

BY NICOLE E. DRAKE

In November, a group of students from the Fish, Wildlife and Conservation Ecology Department in the College of ACES gave the Knox Hall pond a makeover. Over five days, they organized a turtle and fish rescue, cleaned and refilled the pond, and returned rescued wildlife to the waters.

“The students loved the hands-on experience of learning aquatic life, using a practical and important aquatic collection technique, and learning how to keep animals alive,” said Colleen Caldwell, affiliate professor in the FWCE Department and unit leader of the New Mexico Cooperative Fish and Wildlife Research Unit.

Rescued turtles and fish were immediately taken to the Knox Hall Fisheries Laboratory for care until the pond was refilled. Students cleaned turtles by gently scrubbing their shells and placed fish in 350-gallon tanks filled with fresh water and dissolved oxygen. Eventually, the students returned a total of 32 turtles and hundreds of native fish to the pond, including 500 native bluegill sunfish, four largemouth bass and approximately 100 topminnows, which Caldwell said balanced the pond’s food web.

The students also removed about 200 pounds of goldfish and other fish con-



Students from the Fish, Wildlife and Conservation Ecology Department organized a cleanup of the Knox Hall pond in November and rescued dozens of turtles and hundreds of fish. The cleanup effort was a service project headed by ACES affiliate faculty member Colleen Caldwell.

sidered prolific breeders and harmful to the pond’s ecology.

The cleanup was part of a service opportunity that also brought together the NMSU chapter of the America Fisheries Society, The Wildlife Society, FWCE Graduate Organization and graduate students from the Department of Biology. Regents Professor Martha Desmond and students from her

undergraduate class also participated in the cleanup as an experiential learning project. Desmond’s students assisted with cleaning and notching turtle shells for future studies.

Caldwell said the students’ efforts should serve as a reminder to the public to never release unwanted pets into New Mexico waters – including the now-sparkling Knox Hall pond.



A modernized agricultural district begins to take shape at NMSU

Construction of the first phase of NMSU’s Agricultural Modernization and Educational Facilities project, approved by New Mexico voters through general obligation bonds in 2018, is well underway. Building frames are beginning to rise out of the concrete foundations, and the sounds of construction are everywhere in the Las Cruces campus agricultural district.

The first phase will focus on construction of a biomedical research center; an animal nutrition and feed manufacturing facility; and a food science, security and safety facility. For more information about the fundraising campaign to support the Agricultural Modernization and Educational Facilities project, visit nmsufoundation.org. Follow the project at nmsu.link/Construction.



NMSU-developed chile takes root in space



A red chile pepper grown aboard the International Space Station floats above a cutting board.

Chile has made its way to space – thanks in part to the talents of NMSU graduates.

A chile pepper cultivar developed at NMSU – NuMex “Española Improved” – was successfully grown aboard the International Space Station last year as part of NASA’s Plant Habitat-04 experiment.

The cultivar – developed in 1984 by NMSU’s Roy Nakayama and Frank Matta – produces chile peppers that grow well in north-central New Mexico, which has a shorter growing season. Nakayama, a 1948 NMSU graduate, was a horticulture professor at NMSU. Matta, a two-time NMSU graduate, was an Extension horticulturist and superintendent of NMSU’s Sustainable Agriculture Science Center at Alcalde.

Jacob Torres, a 2014 NMSU graduate and a technical and horticultural scientist with Amentum at NASA’s Kennedy Space Center, was part of the team that spent more than two years evaluating more than two dozen pepper varieties.

According to NASA, chile pepper seeds started growing on the space station in July 2021. Astronauts conducted the first harvest in late October 2021.

GRAPE EXPECTATIONS

AES sites look to flowering cover crops to improve vineyards and pollinator habitats

BY ADRIANA M. CHÁVEZ

The Agricultural Science Center at Los Lunas is leading a statewide effort examining flowering cover crops for their effectiveness at promoting vine growth and performance, pest management, soil health and pollinator conservation.



A bee at the Agricultural Science Center at Los Lunas, where researchers are studying the benefits of flowering cover crops – a mix of annuals and perennials – in vineyards.

While New Mexico may be known for its delicious wines, many people don't realize the work it takes to grow wine grapes in the state's varied climate regions.

A project led by ACES researchers Miranda Kersten and Gill Giese, both of the Agricultural Science Center at Los Lunas, may help vineyards maintain stable soil health while fostering an environment that promotes pollinator conservation.

The Research to Grassroots project, which began last fall, looks at flowering cover crops – a mix of annuals and perennials

– and their effectiveness at promoting vine growth and performance, pest management, soil health and pollinator conservation while mitigating soil erosion. Funding for the project comes from a Western Sustainable Agriculture Research and Education, or Western SARE, grant.

“Our main goal is to show we can establish these inter-row areas (the rows between vines) as habitats and promote insect biodiversity and conservation,” Kersten said. “The cover crops should have little to no impact on the grapes, but just having the plants in the ground should help the vines.”

Kersten said the cover crops should help increase the health of otherwise bare soil and water quality while mitigating erosion and run-off. The cover crops will also attract pollinators such as domesticated and native bees and provide pest control by attracting the natural enemies of pests that attack vines. Grapes are essentially self-pollinated and do not need pollinators to bear fruit.

The project also entails collecting climate data from sites statewide and creating educational workshops and materials.

Giese called the project a “pilot study that can have broad implications.”

“I think it's really where agriculture needs to be, at this nexus of natural conservation and production ag for profit,” Giese said. “We can coexist with the natural world, and I think this is a step in that direction.”

Giese said New Mexico has 10 verified growing zones and is home to several vineyards ranging from 3,500 feet to nearly 7,000 feet in elevation. He hopes the project, which includes producer collaborators all over the state, can beta test climate-change concepts.

“If we can do this, then we'll have a proof-of-concept for different species of plants and maybe tie into some of the other permanent crops like pecans,” Giese said.

Project collaborators include NMSU project adviser and statistician Ciro Velasco-Cruz; Jim Peterson, vineyard manager of the Pueblo of Santa Ana vineyard; Emmanuel Lescombes, viticulturist for Lescombes Vineyard in Hidalgo County; and several representatives from NMSU agricultural science centers across the state. Each project site will have a full-time manager who will monitor plantings and ensure the likelihood of success. The sites will also be featured at future field days in the summer and fall.



ACES researchers believe cover crops in vineyards may help increase soil health and water quality and mitigate erosion and run-off. Cover crops also will attract pollinators such as domesticated and native bees and provide pest control by attracting the natural enemies of pests that attack vines.

“We're excited to have part of this project at the vineyard at the Agricultural Science Center at Los Lunas,” said Mark Marsalis, the center's superintendent. “With increasing interest and previous research showing the benefits of cover crops, it is important to expand this work into the different cropping systems of New Mexico.”

Peterson, who has collaborated with Giese on other projects, said he hopes the research will find a way to help minimize soil erosion.

“We have a lot of sandy soil, so holding moisture is challenging,” said Peterson, adding that his vineyard is irrigated daily for two hours. “We'll be putting in an underground drip system to irrigate the cover crops to get it established, and I'm hoping overall it will slow down the wind and soil erosion.”

Kersten said 75 percent of the cover crops in the trial will consist of plants found naturally in New Mexico.

“Many are adapted to more xeric environments, so they should be able to grow with less water,” Kersten said.

The researchers expect the two-year project to culminate in training courses for stakeholders and the general public to learn about the effectiveness of native plants as cover crops and how to propagate and manage them successfully.

For more information, visit nmsu.link/Los-Lunas-ASC and nmsu.link/Pollinator-Health.

A GROWING TRADITION

New partnership with Luna Rossa Winery highlights NMSU's connection to wine industry

BY AMANDA BRADFORD

A partnership between the College of ACES and a southern New Mexico winery is highlighting NMSU's role in the rich history of wine production in the Rio Grande Valley.

Luna Rossa Winery released two new wines last fall that celebrate the winery's connection to NMSU and New Mexico's agricultural roots – and proceeds from the sale of the wines will support scholarships for NMSU students pursuing degrees in agricultural fields.

The winery, founded by Paolo and Sylvia D'Andrea, is home to New Mexico's largest vineyard, New Mexico Vineyards in Deming, and a popular pizzeria in Las Cruces. Paolo D'Andrea brought his expertise in viticulture and the winemaking legacy built by generations of his northeastern Italian family to southern New Mexico, where Luna Rossa wines have grown in popularity and garnered awards.

"Some of the best wines in southern New Mexico are made by Luna Rossa," College of ACES Dean Rolando A. Flores Galarza said. "Paolo is an outstanding winemaker, and this partnership celebrates both the creation of excellent local agricul-



Luna Rossa Winery – owned by Paolo and Sylvia D'Andrea, pictured above with their son Marco, who earned a master's degree from the College of ACES in 2020 – released two wines last fall through a new partnership with NMSU.

tural products and the cultural roots of the college in New Mexico."

Grapevines were first brought to New Mexico by Franciscan monks in the 1600s to produce sacramental wine. What began

hundreds of years ago in North America's first grape-growing region has grown in recent decades into an industry that brings in more than \$876 million in annual economic impact to New Mexico and supports

more than 7,000 local jobs, according to 2017 figures.

During that time, NMSU has played an important role in the expansion of the industry, conducting research and education to help winegrowers improve their product.

The NMSU Valle del Vino wines from Luna Rossa include a pinot grigio and a tempranillo – a varietal chosen as a nod to the Spanish origins of New Mexico's first grapevines.

Paolo and Sylvia D'Andrea have a strong connection to NMSU – their children are Aggie graduates, as are many of their employees and customers. Paolo has been a guest lecturer in viticulture courses, and Sylvia said the partnership goes both ways, as their business has benefited from the research conducted by the College of ACES. She said the pairing is also an opportunity to show that great wine can be made in New Mexico, fostering a sense of pride in both the product and NMSU connection.

"These NMSU wines mean something to the students who come in and to the alumni," Sylvia D'Andrea said. "They love collecting these wines because of their attachment to the university and the rich history that accompanies it."

The NMSU Valle del Vino wines are available at Luna Rossa Winery and Pizzeria in Las Cruces, 1321 Avenida de Mesilla, and Luna Rossa Winery in Deming, 3710 W. Pine St., as well as local grocery stores.

For more information, visit lunarossawinery.com.

The NMSU Valle del Vino wine collection includes a pinot grigio and a tempranillo. Proceeds from the sales of the wines will support scholarships for NMSU students pursuing degrees in agricultural fields.



From left, Betsy Stringam, Sergio González, Maria Fernanda, Andres Martinez and Jennifer E. Martinez. Stringam, an ACES faculty member, is working with Jennifer E. Martinez, a graduate student at NMSU, to develop worker-oriented training on adapting to automation in the hospitality industry. Their work has looked at the Kiiwibot food-delivery service at NMSU.

Josh Bachman

HOSPITALITY *in an* AUTOMATED WORLD

Betsy Stringam spearheads research to help service industry professionals adapt to new workplace technology

BY CASSIE MCCLURE

If a robot has ever delivered extra towels to your hotel room, you've experienced the forefront of technology that has been shaking up the hospitality industry. For ACES faculty member Betsy Stringam, balancing increased automation with the traditional human touch of hospitality will come down to thorough workforce training.

Stringam, professor of hotels and resorts in the School of Hotel, Restaurant and Tourism Management, has received a \$301,999 grant from the National Science Foundation to envision, design and engage in worker-oriented research and training on the growing use of automation in the hospitality industry, which the COVID-19 pandemic has accelerated.



Josh Bachman

Kiwibot employee Sergio González explains how he repairs a delivery robot at the Kiwibot headquarters on the NMSU Las Cruces campus. The Kiwibot food-delivery service launched at NMSU in August. Stringam's studies on automation in the hospitality industry have looked at the Kiwibot rollout at NMSU.

The grant, led by Carnegie Mellon University, allows NMSU to collaborate with other universities, including the University of Illinois, Michigan State University and Stockton University.

“Labor experts are predicting that anywhere from 50 to 85 percent of hospitality tasks will be automated in the next five to 10 years,” Stringam said. “Our general

premise is that hospitality workers and the industry are not ready for that.”

Stringam said the pandemic moved up the need for the industry to automate.

“Three years ago, would you have scanned a QR code and read a menu on your phone? Would you have wanted to check into a hotel on your phone?” Stringam asked. “The hospitality industry has always been

people in service. Now, we’re redefining what service is and what is a good experience.”

Stringam has found others asking the same questions, including Jennifer E. Martinez, Stringam’s graduate research assistant on the project. Martinez is pursuing a master’s degree in experimental psychology with a specialization in engineering psychology.

“I have an extreme interest in this topic because automation is our future, and I want to prepare people for this change in our society,” Martinez said. “Research is needed to help these industries learn how to become fluent in working alongside various technologies such as robots.”

These days, Stringam explained, a customer service agent might need to change batteries in a robot or perform simple diagnostics, and a line cook may need to look out for delivery requests and restock a robot.

“For example, our studies here in Las Cruces on the NMSU campus are looking at Sodexo and the rollout of the Kiwibots, the food-delivery robots,” she said. “I took students to experience what happens on the backside of the house. We know what happens when I order, but how does it get to me?”

Stringam added, “One of our roles in this grant is to work with some of these large organizations so that when they write labor contracts, they are able to ensure workers will be able to successfully navigate technology changes. Their workers will need adequate training, adequate preparation and adequate tools to navigate a job that will include automation.”

Stringam said companies may even need to create new roles and train managers, for example, to manage both automated processes and employees in new positions.

“A housekeeper could turn a robot off and on, but they can’t troubleshoot it,” she said. “There could be an entirely new position whose role is to troubleshoot the hotel’s technology and facilitate employee use of the technologies.”

Stringam has already found some hurdles the industry will need to overcome as

automation grows. She explained that even if one property is automated, changes may not extend across the brand uniformly because of ownership, management company or location.

“Automation has been very piecemeal, and we’re probably the furthest behind compared to other industries,” she said. “Plus, not everyone enjoys or likes technology. In a study last year, we looked at people and their willingness to interact with a robot. We found that not all guests were eager to interact with a robot. Yet, preliminary

findings in a different study this year surprisingly found that some workers at Sodexo reported that they would prefer to just work on robot orders.”

Stringam said the effects of the pandemic are still impacting studies.

“Right now, we have to structure our studies so that we will not just catch the change factor,” she said. “Even just a year before the pandemic, students and restaurant owners decided that takeout and delivery just wasn’t a good model. Now, all of that has changed.”



Josh Bachman

Stringam, who received a \$301,999 grant from the National Science Foundation last year to examine automation in the hospitality industry, said one of her goals is to work with large organizations to ensure workers receive adequate training to navigate technological advances and changes.

LEVERAGING LEGUMES

Kulbhushan Grover examines drought-tolerant cluster bean for adaptability in New Mexico

BY CARLOS ANDRES LÓPEZ

Bright green and rich in protein, guar reigns supreme in Kulbhushan Grover’s native country.

Grover, an ACES faculty member, hails from India, the world’s top producer of guar, a humble legume that grows in clusters and has many industrial uses.

“It is one of the most drought-tolerant plants we are looking at as an alternative crop for areas like New Mexico because of water issues,” Grover said.

Grover, who specializes in sustainable crop production, has initiated research efforts at NMSU to evaluate guar for its adaptability in New Mexico.

Grover said guar thrives in arid regions of the world. About 80 percent of the world’s guar supply comes from India, and the United States is one of the biggest guar importers.

Guar – which means “cow food” in Hindi – is commonly used as a protein-packed forage for livestock or consumed as a fresh vegetable much like its closely related cousin, the string bean.



Kulbhushan Grover holds guar seeds during a presentation at the Leyendecker Plant Science Research Center in August. Grover, an ACES faculty member who specializes in sustainable crop production, has initiated research evaluating guar for adaptability in New Mexico.

Guar gum – derived from the endosperm of guar seeds – is widely used as a stabilizing or emulsifying ingredient in many food products and cosmetics.

Guar gum’s unique viscosity properties also make it beneficial in the energy industry, Grover said. Drilling companies use guar gum to stabilize water and sand mixtures when extracting gas or oil via hydraulic fracturing, or fracking.

“Guar is very useful in so many industries,” Grover said. “But if we focus on the oil industry – which is one of the biggest industries – we are talking about hundreds of millions of dollars in a guar product.”

Grover said the demand for guar gum in the oil industry alone far exceeds supply. Currently, there is only one guar producer in the U.S., he added.

“There’s a huge potential that we can tap into to grow guar domestically,” he said.

For that reason, Grover views guar as a lucrative crop for New Mexico growers.

He began his research into guar adaptability several years ago, establishing research plots at the Fabián García Science Center and Leyendecker Plant Science Research Center in Las Cruces.

Grover’s research findings show guar can be successfully adapted to grow in semi-arid desert regions like New Mexico because of its ability to tolerate heat and water stress.

“For many years, I worked in one of the main guar-producing areas in India,” he said. “When I arrived in the U.S., I saw we spend a lot of money importing this stuff.



Grover gives a presentation at the Fabián García Science Center in September. Grover’s research findings show guar can be successfully adapted to grow in semi-arid desert regions like New Mexico because of its ability to tolerate heat and water stress.

That is why I started this research because we have a similar climate here in New Mexico, which is ideal for growing guar.”

Over the years, Grover has worked with various collaborators to support his research, including faculty and students from the Plant and Environmental Sciences Department. He has also collaborated on guar-related projects with the University of Arizona and Texas Tech University and received grants from the U.S. Department of Agriculture’s National Institute of Food and Agriculture to fund his research.

On top of his research projects, Grover is a dedicated educator. He teaches popular courses in plant sciences and sustainable crop production, and his award-winning teaching approaches emphasize experiential learning and organic agriculture.

In 2021, Grover was the lead principal investigator from NMSU who was part of a team of collaborators from New Mexico, Texas and Florida who received a \$1 million grant to help train Hispanic students to conduct research in the agricultural sciences.

“Teaching is where my passion is,” he said.

NMSU student Baylee Johnston prepares to run barrels at a rodeo last October. Baylee is a member of the NMSU rodeo team, which celebrates its 80th anniversary this year.

A RIDE TO REMEMBER

NMSU rodeo team reflects
on 80-year journey

BY JAMES STALEY



NMSU student Amy Bowditch, a member of the NMSU rodeo team, runs barrels last October. The team will host a home competition this spring.

A pair of Levi's, \$68 and a broken nose. That's what the winner of NMSU's first rodeo received, as reported in archived issues of *The Round Up*.

The College-Ranch Hands' Rodeo, as it was known, was popular at NMSU. The following year, a group of Aggies formed the New Mexico Aggie Rodeo Association, according to the 1942 NMSU yearbook.

Today, the unit now known as the NMSU rodeo team celebrates its 80th anniversary, eagerly awaiting its return to a home competition this spring.

"They're absolutely raring to go," said Brice Baggarley, NMSU rodeo's head coach. "Rodeo kids naturally have a lot of self-drive because it's an individual sport. It's really cool to see, even though it is an individual sport, how much they do for each other."

You don't have to look hard to find that supportive spirit across generations of NMSU rodeo.

Chris Allison, who rodeoed at NMSU in the 1970s and later served in the NMSU Cooperative Extension Service as a faculty member, built a practice arena on his property a few miles south of campus.

"I always swore, since we didn't have much when I was a student, that if I was ever in a position to provide students a place to come and practice and keep horses and livestock and get free advice, that's what I'd do," Allison said. "My wife and I always enjoy having the students out here."

And you can trace a line in the dirt from today's team to the 1942 team through Frank DuBois, namesake of the scholarship and bronze award that goes to rodeo athletes at NMSU.

As an NMSU student, DuBois roped calves and bulldogged steers, though he

wasn't on the rodeo team because, he said, he "didn't have enough money and wasn't good enough."

Years later, DuBois was in a leadership role at the New Mexico Department of Agriculture and a team roper. Eventually, though, multiple sclerosis forced him to stop competing.

Once he came to terms with his diagnosis, DuBois found a new way to show his love of rodeo and started pushing to get more resources for NMSU's rodeo team, which receives some state money and fundraises on its own. The team was one of the 13 original members of the National Intercollegiate Rodeo Association.

With DuBois' funding efforts, NMSU secured its first full-time, dedicated rodeo coach, Jim Dewey Brown, in 2002 and started receiving state funding to support rodeo activities. With Brown's guidance and more resources, NMSU's rodeo athletes flourished.

It was also in 2002 that DuBois and others honored the five surviving members of the original 1942 team. Giles Lee, the last surviving member, who died recently, was a friend of DuBois.

From 2002 to 2015, five Aggies won six national rodeo titles. NMSU had 19 Academic All-Americans, and Brown won NIRA Coach of the Year.

Brown, who now runs the World's Oldest Rodeo in Prescott, Arizona, and serves as the NIRA's commissioner, relished his time at NMSU.

"What I miss is the kids," he said. "They were my students, but now they are part of my family."

One of those family members, Baggarley, now occupies Brown's boots at NMSU.

Baggarley rodeoed at NMSU and later was an assistant coach under Brown. He and his wife, Nicole, a professional breakaway roper, met on the NMSU team.

When the opportunity arose in 2020, Baggarley applied for the head-coaching position, a career change that garnered his family's support. Sadly, Baggarley's father

passed away unexpectedly before he got to see his son leading NMSU, which had been a dream of both of theirs.

"I'd like to think we're one of the tightest teams around," Baggarley said of the NMSU team. "They're battling for each other, pushing for each other as much as anything."



Zane Tully rides a bull last October as part of the NMSU rodeo team. From 2002 to 2015, the team won six national rodeo titles.

A WAY WITH WORDS

Shannon Norris guides the next generation of agricultural communicators BY NICOLE E. DRAKE



Rows of faces look back at Shannon Norris as she teaches the fundamentals of agricultural communications and publications.

“Communicators are integrators,” Norris tells her students. “We are often chameleons who seek to understand the needs of our audiences and our sources to tell a clear and compelling story. Communicators are often the people who seek the missing puzzle pieces and search for novel, yet simple, ways to tell a story.”

Norris, an assistant professor in the Agricultural and Extension Education Department in the College of ACES, teaches the Agricultural and Scientific Publications course – a class that provides students with real-world experiences and tools they need to produce published pieces.

“Agricultural and Scientific Publications is a practical, innovative, hands-on course that provides valuable experiences for students to publish in *ACES Magazine*,” Norris said. “Students who take this course gain experience in sourcing, writing, capturing and designing stories for an ACES audience.”

Norris said the size of the college and the makeup of its students, who bring different backgrounds, interests and passions, can create a challenge when covering primary considerations for publishing and uncovering stories that represent the college’s diversity.

“Many times, this challenge requires my students to step outside of their comfort zones and put on their investigator hats to find untold, newsworthy stories,” she said.

Shannon Norris, center, an assistant professor in the Agricultural and Extension Education Department, speaks with students in her Agricultural and Scientific Publications course. Students who take the course gain experience in sourcing, writing, capturing and designing stories for an ACES audience.

“Our students overcome this challenge by leveraging the ACES network to uncover stories as well as having accountability partners in the course to make sure stories tell a broad, yet connected, story about ACES.”

Norris sees it as an honor to cover stories about ACES and NMSU.

“I believe in students, and I believe in their potential,” she said. “I believe effective communication intersects all careers, majors and walks of life. If we can provide tools for students to communicate more clearly, I think we can establish a springboard to help them reach success in all seasons of life.”

A native of Cliff, New Mexico, Norris grew up heavily involved in agricultural activities. She was active in 4-H and the National FFA Organization and served as the National FFA vice president from 2010 to 2011.

After graduating from NMSU in 2013 with a bachelor’s degree in agricultural and extension education, Norris earned a master’s degree from Oklahoma State University in agricultural communications and a Ph.D. in agricultural leadership, education and communications from Texas A&M University.

Before joining NMSU in 2020, Norris developed a curricular framework outlining agricultural assessments in Middle Eastern conflict zones for the United States Army.

“I love this university, and I love our students,” she said. “I believe Aggies are some of the kindest, most resilient and hardest-working students in the nation. The College of ACES is a family, and I, personally, was profoundly impacted by the ACES family when I was a student. When an opportunity to work and give back to my alma mater became available, I jumped.”



Shannon Norris joined the College of ACES in 2020 as an assistant professor in the Agricultural and Extension Education Department.

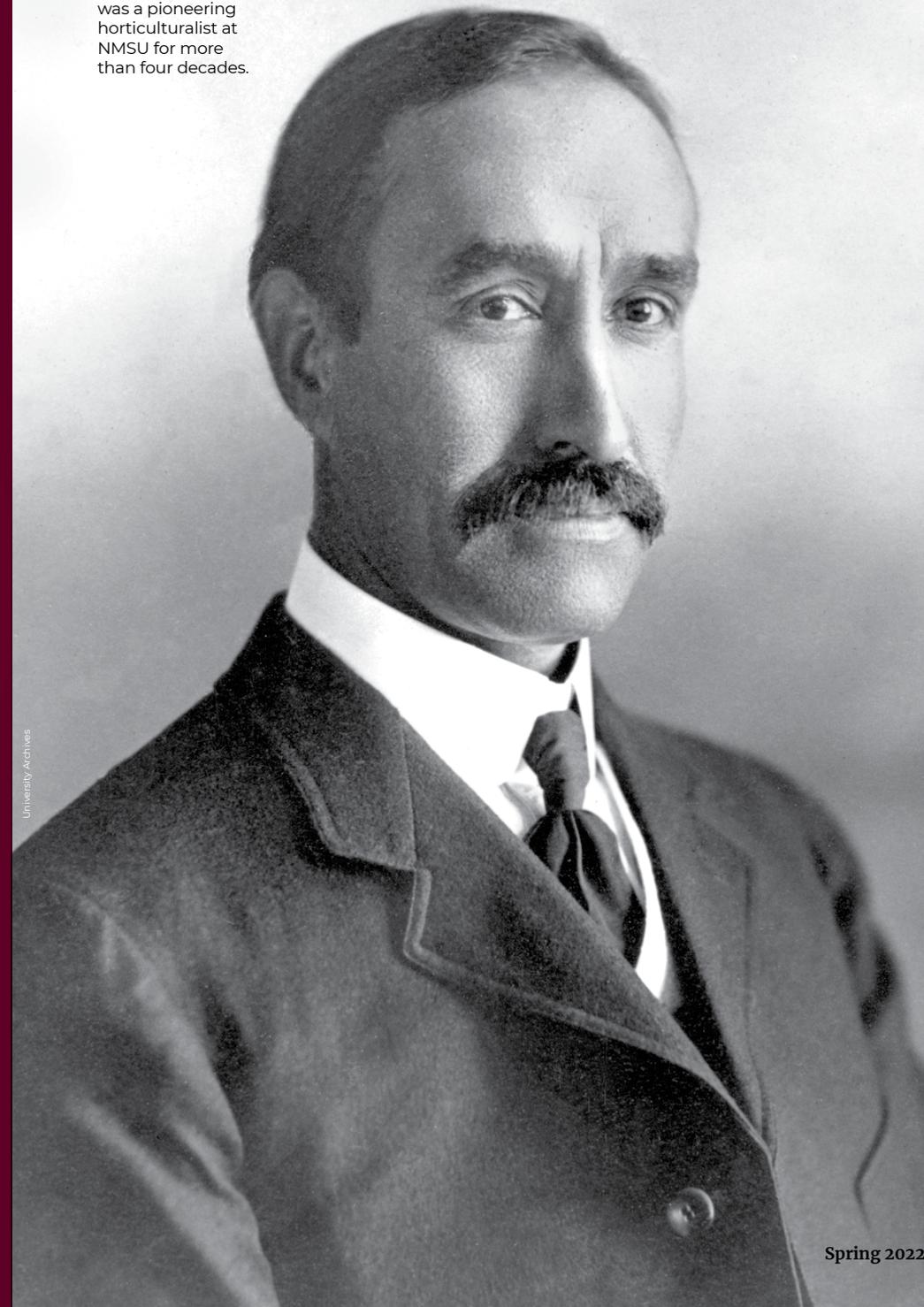
THE PIONEER

Fabián García charted a path at NMSU that transformed agriculture in New Mexico and beyond

BY CARLOS ANDRES LÓPEZ

Fabián García, pictured in 1907, was a pioneering horticulturalist at NMSU for more than four decades.

University Archives



A class of five students made their way into New Mexico history books in 1894 after graduating from the New Mexico College of Agriculture and Mechanical Arts. They were the first to earn degrees from the institution that would become NMSU.

Among that group was an orphaned immigrant from Mexico who, against many odds, became a celebrated horticulturalist credited with transforming agriculture in a state that heralds him as the “father of the Mexican food industry in the United States.”

His name was Fabián García.

García is perhaps best known – and most revered – for conducting pioneering chile pepper research over his decades-long career at NMSU. One of his legacy-defining achievements was developing the first commercially reliable New Mexico chile variety.

Released in 1921, New Mexico No. 9 had a dependable pod size and heat level. It opened commercial markets for New Mexico chile and all but created a new industry in a state that has since become one of the world’s top chile producers.

But García’s research and expertise went far beyond chile.

In the early 1900s, he planted some of the first pecan trees in the Mesilla Valley, laying the foundation for another thriving industry. Some of the 35 pecan tree varieties he planted still stand today. He also introduced an onion variety suitable for growing in dry climates, which helped shape commercial onion production in New Mexico and Texas.

He led efforts to modernize irrigated agriculture in New Mexico and authored an extensive collection of horticulture publications that included tests on pear, peach, grape and plum varieties and trials on onions, spinach, melons and cauliflower.

An American honeybee discovered by T.D.A. Cockerell – *Nomada (Micronomada) garciana* – is named in García's honor.

"The impact Dr. García had on not only New Mexico but the nation and basically the world is extraordinary," said Jeff Witte, secretary of New Mexico's Department of Agriculture. "You're talking about research that happened over 100 years ago at New Mexico State University that is still impactful today and will be impactful for many years to come."

Last year, García joined the ranks of Thomas Jefferson, George Washington, Eli Whitney and other influential agriculture figures when he was inducted into the National Agricultural Center and Hall of Fame more than seven decades after his death.

"García is responsible for the physical transformation of the U.S.-Mexico borderlands," said Peter Kopp, associate professor of history at the University of Colorado-Denver. "If you think about the world around us from West Texas to Baja, California – it's all been transformed by his ingenuity and preservation, which is a pretty remarkable story."

García was born in 1872 in Chihuahua, Mexico, and was raised by his grandmother, Jacoba García, after the deaths of his parents, Ricardo García and Refugio Romero de García. He immigrated to New Mexico's Mimbres Valley at age 2.

Around 1885, García moved to the Mesilla Valley, where his grandmother became a domestic worker for the Casad family in what is now known as Old Mesilla. The family was instrumental in advancing García's education, providing him a private tutor and sending him to what was then known as Las Cruces College. By 1890, he enrolled at New Mexico A&M.

By most accounts, García wasn't a naturally gifted student.

"During his college years and after, people would say things like, 'García wasn't the smartest person,' or 'García had to work hard because he wasn't that smart,'" said Kopp, a former NMSU faculty member who is writing a book about García. "The reality is he didn't learn to read or write English until he was 15 or 16 years old."

But García overcame language obstacles and racial prejudice to prove his scientific might.

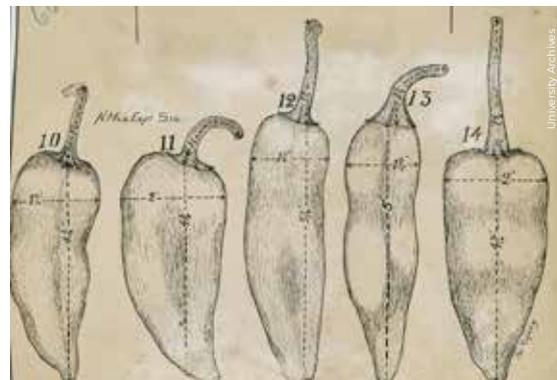
He graduated with a bachelor's degree in 1894 as part of New Mexico A&M's first graduating class, becoming the first person of color to earn a degree from the school. He then completed a year of graduate research at Cornell University, where one of America's foremost horticulturists at the time, Liberty Hyde Bailey, mentored him.

"This experience at Cornell was so important because then he became friends and colleagues with future leaders in the agricultural sciences across the country and world," Kopp said.

García returned to New Mexico A&M and finished his master's degree in 1906. Afterward, he launched his career at New Mexico A&M, began a series of experiments to develop more standardized chile varieties and established the school's chile breeding and genetics program, which still exists today. He married Julieta Amador in 1907.

In 1913, García ascended to the top of the New Mexico Agricultural Experiment

Station, becoming the first person of color to earn a degree from the school, and later earned a master's degree in 1906 after completing a year of graduate research at Cornell University.



Station, becoming the first Hispanic to direct a land-grant agricultural research station in the U.S. He held the position until his retirement in 1945.

The release of New Mexico No. 9 marked a turning point in the nation's agriculture.

"We now had a New Mexican-type chile pod that could meet all the needs of what we were calling Mexican food in the United States," said Paul Bosland, Regents professor emeritus who retired from NMSU in 2019. "We had green chile that would work in salsas instead of jalapeños and serranos. We had red chile now that worked in dishes instead of mirasol, de árbol and chiles like that. One chile became the basis of the Mexican food industry in the United States, and that's why García is known as the father of the Mexican food industry."

Bosland spent more than 30 years at NMSU working to advance chile research from García and his successor, Roy Nakayama.

Bosland said all New Mexican-type chile peppers produced today, including the Anaheim from California, owe their genetic base to García's New Mexico No. 9 cultivar.

For much of his career, García was a staunch ally of underrepresented students, having faced racism in school and later as a professional, and sought to help youth with whom he shared similar experiences, Kopp said.

"He worked very hard to recruit students of color, students from Mexico and students from the borderlands," he said. "He provided them with housing and gave them jobs so they could go to college. These are stories that don't often get elevated because everybody cares about chiles and pecans."

After García died in 1948, he left behind his life's fortune to New Mexico A&M to fund scholarships and a campus



García, far right, stands among fellow students from New Mexico A&M's first class in 1890. He graduated with a bachelor's degree in 1894, becoming the first person of color to earn a degree from the school, and later earned a master's degree in 1906 after completing a year of graduate research at Cornell University.

dormitory for poor students of Mexican and Hispanic heritage.

García's legacy lives on at NMSU through the university's commitment to agriculture and mechanization, said Leslie Egdar, who leads the New Mexico Agricultural Experiment Station today.

"Dr. García was an innovator in his time, and we continue that tradition of seeking opportunities to integrate cutting-edge discovery and research into our agricultural science centers located across the state," Edgar said. "As the current AES director, I am grateful to carry on the tradition of ensuring all New Mexicans benefit from the science and discoveries of AES research."

Despite his professional achievements, García still largely remains unknown outside New Mexico, especially in the shadows of more recognizable agricultural figures.

By nominating García to the National Agricultural Center's Hall of Fame, Witte hoped to shine a light on New Mexico's most famous horticulturist.

"It's super important to understand how we got to where we are today," said Witte, who attended García's induction ceremony in October.

Bosland partly attributes García's lack of name recognition to New Mexicans being too modest to boast about his accomplishments. He thinks that may change over time, however, much like evolving attitudes toward chile.

"Of course, everybody's heard of New Mexico chile. It's a big thing, but it took decades to get the idea across to people that we have something very special here," he said. "With Dr. García, I think we're making progress in telling his story, and each day, we're making a little more."

FABIÁN GARCÍA

THROUGH THE YEARS

1872

García is born in Chihuahua, Mexico, on Jan. 20

1873

García immigrates to the United States with his paternal grandmother

1889

García becomes a naturalized U.S. citizen

1890

García enrolls in New Mexico College of Agriculture and Mechanic Arts

1894

García earns a bachelor's degree from New Mexico A&M as part of the school's first graduating class

1899

García conducts a year of special graduate research at Cornell University

1906

García earns a master's degree from New Mexico A&M and begins working as a professor and researcher

1907

García starts groundbreaking research to develop more standardized chile pepper varieties

1913

García becomes the first director of the New Mexico Agricultural Experiment Station

1921

García releases New Mexico No. 9, the first New Mexican chile variety with a dependable pod size and heat level

1945

García retires from New Mexico A&M

1948

García dies after a three-year battle with Parkinson's disease and leaves his entire estate to New Mexico A&M



García on horseback in downtown Las Cruces, circa 1900.



García stands near 14-foot high corn stalks in the Mesilla Valley, circa 1900-1910.



García, right, sits with an unidentified man in the Mesilla Valley, circa 1901-1905.



García, third from left in the back row, poses with a group of men in a studio portrait, circa 1901-1905.



García with wife, Julieta, at Niagara Falls in New York, circa 1914. The couple married in 1907.



Hiram Hadley, left, with some members of New Mexico A&M's first graduating class, Agnes Williams, García, Oscar Snow and Ray Larkin, in 1919.



García holds a tool under a tree, circa 1920-1930.



García, left, works in a garden with an unidentified man, circa 1930-1940.

Photos from University Archives

Chile peppers take center stage in Dennis Lozada's research at the Fabián García Science Center.

Josh Bachman

A 'REVOLUTION' CONTINUES

New generation of horticulturalists work to advance chile research started by Fabián García

BY CARLOS ANDRES LÓPEZ

Dennis Lozada and Stephanie Walker count themselves among the scores of researchers from NMSU and beyond who revere Fabián García. As chile and plant breeders, they've dedicated much of their professional lives to advancing García's work.

"I must say he started a revolution," said Lozada, who joined NMSU in 2020 to become the university's fourth chile breeder in more than a century, following in García's footsteps. "Fabián García initiated the chile industry in New Mexico – which would not be known worldwide as the chile capital of the world without what he started at NMSU."

During his career at NMSU, García developed the first commercially reliable New Mexico chile variety, introduced the Grano onion breed, planted some of the first pecan trees in the Mesilla Valley and led efforts to modernize irrigated agriculture in New Mexico.

He also served as the first director of the New Mexico Agricultural Experiment Station and established a research farm in the Mesilla Valley. Today, that farm is a sprawling hub known as the Fabián García Science Center, where scientists like Lozada and Walker conduct cutting-edge research to build on García's work.

"Fabián García was years ahead of his time," said Walker, Extension vegetable specialist at NMSU. "He's one of these unique individuals who could see the future and see important things that needed to happen – and he took concrete steps to move toward this exciting future for our state."

Both Lozada and Walker view García as a constant influence in their work and research.

“We still use the original cultivars he developed in our work today,” said Lozada, who also serves as the director of the Chile Pepper Breeding and Genetics Program at NMSU.

Walker, meanwhile, used García’s chile research that resulted in his career-defining achievement – the New Mexico No. 9 cultivar – as a framework to develop and introduce a new chile variety.

Earlier this year, Walker released the variety – a New Mexican-type chile pepper cultivar developed with traits critical for efficient mechanical harvest. Called NuMex

Odyssey, Walker’s variety was 12 years in the making and boasts a traditional New Mexican green chile pepper flavor, low heat and provides a high yield of mechanically harvested, marketable fruit.

“Fabián García set the course for doing exactly what we did with NuMex Odyssey,” said Walker, who considers García her personal hero. “He was an out-of-the-box thinker who kicked off some of the major industries that we currently have in New Mexico through his initial research.”

Lozada, who hails from the Philippines, said he admires García on a personal level. At age 2, García immigrated to the United States from Mexico.

“I can relate to him as an immigrant,” he said.

Under Lozada’s leadership, the Chile Pepper Breeding and Genetics Program has experienced considerable growth over the past two years. He currently oversees two full-time employees at the Fabián García Science Center and Chile Pepper Institute and advises two graduate students and seven undergraduates.

Lozada’s current chile research involves a process known as genomic-assisted breeding.

“By using information from DNA sequences, or genetic material, we’re able to facilitate plant breeding,” he said. “These DNA sequences can help direct our breeding and selection decisions, and by knowing which DNA sequences particular varieties have, we can predict whether they can perform well.”

One of Lozada’s former students, Lanie Whelpley, spent the last year of her undergraduate studies working as a research assistant at the Chile Pepper Institute. Whelpley helped Lozada conduct a meta-analysis examining genetic regions within the chile pepper genome.

Whelpley, who is now pursuing a master’s degree in biology at NMSU and conducting research related to the vesicular stomatitis virus, said García remained at the forefront of the project.

“It all goes back to this one goal of his, which was to improve this crop and improve this plant,” she said. “We always have that in mind. So, while our research gets more intricate and more detailed, we still go back to the same goal that we want to make the chile pepper crop as successful as it can be.”

Whelpley, who also co-authored a research paper with Lozada, said her experience working in the Chile Pepper Institute allowed her to explore her interest in bioinformatics while building on García’s work.

“It’s rare to see researchers to continue the same research that started over 100 years ago,” she said, “and it’s really inspiring to see that we’re still working toward his goal and dream.”



Dennis Lozada, far left, joined NMSU in 2020 to serve as the university’s chile breeder and director of the Chile Pepper Breeding and Genetics Program. Lanie Whelpley, above, helped Lozada complete a meta-analysis examining genetic regions within the chile pepper genome while she was an undergraduate student and research assistant at the Chile Pepper Institute.

Stephanie Walker, left, Extension vegetable specialist at NMSU, released NuMex Odyssey, a New Mexican-type chile pepper cultivar, earlier this year. The cultivar boasts a traditional New Mexican green chile pepper flavor, low heat and provides a high yield of mechanically harvested, marketable fruit, as seen below.





Fabián García helped start the chile pepper industry in New Mexico with the release of New Mexico No. 9 – the first New Mexico chile variety with a dependable pod size and heat level – more than a century ago.

University Archives

FIELD to FORK

Fabián García's early successes fueled food industries across New Mexico

BY KRISTIE GARCIA

When Louis Biad talks about the diced, chopped and ground products created at Rezolex – a processing facility north of Las Cruces – he's quick to point out the popularity of chile peppers is due in part to the early research and development by Fabián García.

"You have to trace it back and acknowledge that it really wouldn't be possible without these pioneers who came before us," Biad said. "The best word to describe Dr. García is 'pioneer.' His contributions are still felt today in the varieties we use."

Biad is a partner at Rezolex, which specializes in processing chile peppers into powders and other forms of dehydrated products. From paprika to diced green chile, Rezolex offers many products made from New Mexico's signature crop – a crop leveraged by García's chile pepper variety research in the early 1900s.

García released New Mexico No. 9, the first New Mexico chile variety with a dependable pod size and heat level. This new pod variety opened commercial markets for New Mexico chile and established the state's chile pepper industry. New Mexico No. 9 later served as the genetic basis for many other New Mexico-type chile peppers, the including the popular Sandia pepper.

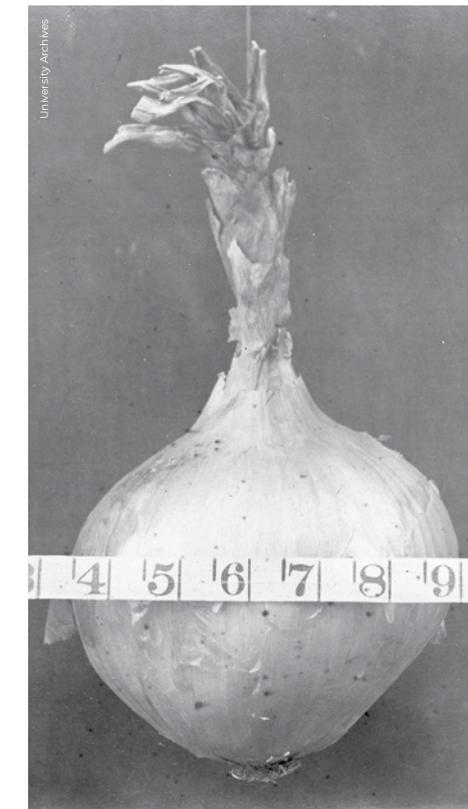
Biad said the Sandia variety is still widely used for red and green chile products.

"A 'hot' red enchilada around here is very possibly Sandia," he said. "It has a great sweet taste, not just heat. We also produce some green Sandia, typically diced or ground into powder. It has a beautiful olive-green color."

New Mexico has emerged as the top chile pepper-producing state in the nation.

Growers produced a total of 68,000 tons of chile in 2020, valued at \$51.9 million. Doña Ana County – the very location where García researched chile peppers and developed cultivars – had the second-highest chile production in the state.

Much of Rezolex's success depends on the survivability of chile crops, and Biad attributes that, in part, to García's early efforts.



García's research was not only limited to chile peppers. He also introduced the Grano onion variety – a variety based on high-yielding type from Spain. New Mexico's onion production ranked No. 5 in the nation in 2020, with an estimated value of \$87 million.

"Through his research and development, Dr. García created varieties that could survive, grow and thrive here in southern New Mexico," Biad said. "Without that step, it is very difficult to climatize varieties that are meant to be coastal or mountainous to our dry, arid climate. It would've been difficult to do business without his framework."

García's research was not only limited to chile peppers, however. He also introduced the Grano onion variety. Some 30 years after García's death, a Texas newspaper referenced his onion research.

"Our main crop, onions, are not easy to cross since they have large flower heads, so we didn't attempt much in onion breeding," Texas horticulturist Ernest Mortenson told the San Antonio Light in October 1979. "We had good relations with Dr. Fabian García, Director of the New Mexico Agricultural Experiment Station, and he had obtained a high-yielding variety from Spain from which he had selected a strain for New Mexico he named Grano."

New Mexico's onion production ranked No. 5 in the nation in 2020, with an estimated value of \$87 million.

García also planted some of New Mexico's first pecan trees in Doña Ana County. New Mexico is now the second-highest pecan-producing state, behind Georgia. Doña Ana County is the top pecan-producing county in the nation. In 2020, New Mexico produced 77 million pounds of pecans, value at more than \$108 million.

From onion fields to pecan orchards, and from chile pepper fields to food dishes, New Mexico agriculture is forever tied to García and his early research and breakthroughs at NMSU.

COMMUNITY CONNECTIONS

Taking after Fabián García, Extension staff spread research-based knowledge across state

BY TIFFANY ACOSTA

Among Fabián García's notable accomplishments is a bond to the people of New Mexico. From developing modern irrigation agriculture to testing many fruit and vegetable varieties, his influence reaches each corner of the state.

Jon Boren believes García's legacy lives on through the work of NMSU's Cooperative Extension Service.

"He recognized the value of bringing his research knowledge to New Mexico communities," said Boren, associate dean and director of NMSU's Cooperative Extension Service. "He got out into the communities. Today, our Extension specialists do the same thing by bringing research-based information to communities. He understood their needs and brought his research-based knowledge to them."

Through the Cooperative Extension Service's non-formal education programs in each of the state's 33 counties, NMSU

faculty research reaches about a third of New Mexico's 2 million residents. With more than 250 faculty and staff members, nearly 11,000 volunteers and 54 offices statewide, the Cooperative Extension Service strives to bring a wide range of research-based information and expertise directly to New Mexico residents.

Boren pointed to García's early pecan variety trials, which helped shape New Mexico's culture and economy, as a model for Extension research.

"From an Extension standpoint, he demonstrated to New Mexican growers that a crop that was not native to New Mexico could be grown well," Boren said. "Extension specialists have a variety of trials throughout the state that extend some of the early work that Fabián initiated. And importantly, our Extension specialists are using some of the same processes that Fabián used to test, develop and introduce novel crops to New Mexico."



The NMSU Cooperative Extension Service Vegetable Program conducts vegetable variety trials at the Jose Fernandez Garden. Extension specialists are currently exploring ways to expand the use of novel and unusual vegetables in New Mexico.

García brought novel crops to New Mexico and used traditional breeding methods to improve them, said Rolston St. Hilaire, head of the Extension Plant Sciences and Plant and Environmental Sciences departments.

"Today, our breeders use the traditional breeding methods to improve crops such as chile," St. Hilaire said. "For example, our specialists have developed chile pepper plants that could be harvested mechanically."

Extension faculty and staff often conduct research trials at the Fabián García Science Center, a 45-acre research station in Las Cruces. St. Hilaire said Extension specialists are currently exploring ways to expand the use of novel and unusual vegetables in New Mexico.

Chile pepper research underway at the center uses traditional methods to breed chile peppers for multiple traits, such as suitability for mechanical harvesting and resistance to disease, and incorporates tests to evaluate harvesting via robots.

Current pecan research includes trials to survey the microbiome of soil around pecan trees growing onsite at the center. Grape research involves growing wine grapes adapted to New Mexico's climate and determining how best to process grapes into wine using the center's fermentation lab.

A PLACE FOR DISCOVERY

Established in 1906, the Fabián García Science Center is a 45-acre hub for research activity, where students and faculty engage in hands-on learning and innovation. Today, it is home to the Chile Pepper Institute and a multitude of research plots and greenhouses. Here's a look at some projects housed at the center. *Compiled by Tatiana Favela*



ALGAE GROWTH SYSTEM ▲

The New Mexico Consortium and NMSU jointly own the miniature raceways at the Fabián García Science Center. Currently, the ponds are part of a U.S. Department of Energy project led by Alina Corcoran, a senior research scientist at NMC and affiliate faculty at NMSU, and Shawn Starkenburg, a scientist and deputy group leader at Los Alamos National Laboratory. The project supports graduate students mentored by Omar Holguin in the Plant and Environmental Sciences Department at NMSU.

ONION BREEDING PROGRAM ►

The onion breeding program at NMSU develops onion cultivars for New Mexico and carries out research to find pest- and disease-resistance traits. Between June and July, New Mexico produces 40 percent of the onions grown in the U.S.



PECAN RESEARCH ◀

Previous pecan research evaluated the effects of using brackish groundwater and RO concentrate to irrigate pecan trees. Desalination of brackish groundwater using reverse osmosis results in highly salted "reject water" known as RO concentrate. Researchers sought to determine if pecan trees were suitable for irrigation with brackish groundwater and RO concentrate. They also evaluated the possible effects on pecan growth and physiological parameters. Findings from the study suggest that brackish groundwater and RO concentrate are not suitable for long-term pecan irrigation in arid areas.

CHILE PROGRAM ▼

NuMex Las Cruces Cayenne is a high-yielding cayenne pepper developed for the New Mexico cayenne industry. It is a bright red, curly top-resistant cayenne variety that has a yield comparable to many commercial high-yielding peppers.



Fabián García found purpose in helping the people of New Mexico thrive – especially students

A LIFE DEDICATED TO OTHERS

ESSAY BY JEANNE GLEASON

Fabián García died in 1948, but his legacy lives on. Although he made an astounding number of agricultural achievements that brought prosperity to our state, he’s my hero because of his integrity, creative problem-solving and ability to understand the struggles of low-income students.

He faced prejudice because of his Mexican heritage, yet he remained gracious, hardworking, kind and full of inventive ways to help anyone in need, regardless of their nationality, income or economic status. While he devoted his life to helping all students, families and agricultural producers, he was especially interested in helping students facing financial hardships.

García knew from his own experience that students learn best when “book learning”

is coupled with first-hand experience. While teaching a horticulture class at New Mexico A&M, he realized there were concepts his students could only learn by growing crops themselves. When the school, now known as NMSU, hesitated to invest in land for a research farm, García personally took out a bank loan to buy land in today’s Mesilla Park. To pay back the loan, he and his students planted watermelons.

But the land had no easy access to irrigation water, so García and his students installed hand-operated “pitcher pumps” around the farm. Morning and evening, the students pumped buckets full of water and carried them across the field to each watermelon plant. By summer’s end, they sold enough watermelons to pay the bank in full. But more importantly, the

students learned about agronomic principles and experienced the rewards of creative problem-solving.

García also encouraged New Mexico A&M to build low-cost housing on its research farm, so students who couldn’t pay for campus housing still had an affordable place to live.

García set out to help agricultural producers implement more efficient and cost-effective strategies to grow, protect, harvest and market crops. He traveled around New Mexico in 1912 aboard the Extension Demonstration Train, giving farmers access to new ideas about improving their farming practices and introducing them to new crops.

In 1907, García married Julieta Amador, daughter of one of the Mesilla Valley’s

oldest and most prominent families. Sadly, the couple’s only son died in infancy. Julieta later died in 1920.

Upon his death in 1948, García left New Mexico A&M more than \$85,000 (worth \$975,521 today) to fund a campus dormitory (now called García Center) and scholarships for low-income Hispanic and Mexican students.

“I want to help poor boys,” he once said, “for I know their hardships.”

So what impact has Fabián García had on my life? Although he passed away four years before I was born, I was a first-generation college student who lived in the dormitory that still bears his name – García Hall. I applied for and received financial aid in the building he funded. I’ve made many documentaries at García’s research farm (now called the Fabián García Science Center) and attended training sessions in the NMSU Faculty Senate hall named in his honor.

But his biggest impact on my life has been as a role model. His life was far from perfect, and his childhood included pain, trials and disappointments. Yet, he graciously helped all he could. He was a man of dignity, determination and values – a wonderful hero for all of us to emulate.

Jeanne Gleason earned three degrees from NMSU and a doctorate from Virginia Tech. Formerly the department head of Innovative Media Research and Extension, and now a professor emeritus, Gleason worked in the College of ACES for more than 45 years.

Fabián García was gracious, hardworking, kind and full of inventive ways to help anyone in need, regardless of their nationality, income or economic status. He devoted his life to helping students, families and agricultural producers throughout New Mexico.





HOMAGE TO A HERO

BY CARLOS ANDRES LÓPEZ

When *ACES Magazine* reached out to the NMSU Art Department to commission artwork for the cover of its spring 2022 issue, Craig Cully immediately knew Natalie Morales would be the right artist for the job.

Morales, a skilled portraitist and junior pursuing a bachelor's degree in studio arts, created an original portrait of Fabián García featuring an assortment of New Mexico's signature crops that García improved during his time at NMSU.

"For the concept behind the final piece, I wanted to do something inspired by one of those old vintage posters of produce that have highly illustrated drawings and visible linework," she said.

Morales began working on the cover art in December 2021, starting with research. She developed several concepts during the first weeks of the spring 2022 semester and later drew the final piece in February, using color pastels.

Throughout the process, Morales worked closely with Cully, an associate professor of painting and drawing, who strongly recommended Morales for the project.

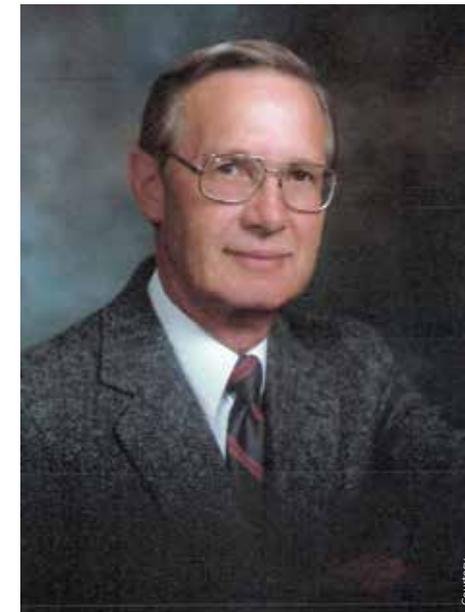
A color-pastel portrait of Fabián García painted by NMSU studio arts student Natalie Morales.

Aggies come together to establish scholarship honoring late professor

BY CARLOS ANDRES LÓPEZ

Joe Williams had many influential professors at NMSU – but James R. Gray stands out among the best.

Williams first met Gray, a professor of agricultural economics, as a freshman in 1961. At the time, Williams was holding down two part-time jobs to pay for school and was searching for full-time summer employment when Gray hired him to help with field enumeration work.



An endowed scholarship named after James R. Gray, pictured above, will support an ACES graduate student majoring in agricultural economics and agricultural business.

It was the beginning of their decades-long friendship.

Gray mentored Williams through his undergraduate and graduate studies and later as a young faculty member at NMSU. Williams became a research associate in the College of ACES in 1969 after serving in the United States Army.

“After the service, I became one of his colleagues, and we became much closer on a personal level,” said Williams, now a retired educator and researcher who spent 35 years at Oklahoma State University. “He continued to be one of my biggest supporters when I was a young faculty member.”

Last year, Williams and his wife, Sue, whom he met at NMSU, set out to honor Gray, who retired in 1984 and died in 1997. They decided to start an endowed scholarship in Gray’s name and began reaching out to his former students to join their effort.

Williams first called an old classmate, former NMSU Chancellor and President Garrey Carruthers, who agreed almost immediately to contribute to the cause, Williams said. Eight others pledged donations, and by early 2021, the James R. Gray Memorial Endowed Scholarship was fully endowed. The scholarship will support an ACES graduate student majoring in agricultural economics and agricultural business, starting in fall 2022.



Joe Williams pictured as a senior at NMSU in 1964.

Williams said leading the scholarship effort allowed him to fulfill a long-held promise to give back to his alma mater and those who mentored him.

“I’m indebted to NMSU for everything I’ve accomplished professionally,” he said. “I always wanted to give back to the university, and this scholarship is a perfect way to do that and recognize Dr. Gray.”



“Natalie is one of those rare individuals whom I’ve had the privilege of working with who simply cannot do any wrong,” Cully said. “Everything she creates is so stunningly beautiful, and this cover of Dr. García stands as a testament to her talent.”

Morales, a Deming native, has had a lifelong passion for drawing, but she started taking art more seriously when she became an Aggie.

“I’ve always liked art,” she said, “but I didn’t think of it as a career path until I

got into the Art Department during my freshman year.”

Morales said creating the cover was a unique learning opportunity. It was her first commissioned piece, and it was her first experience using color pastels as a medium.

“It was really fun learning how to work with new materials,” she said.

The project also gave her the chance to learn about García and his legacy.

“I found him really inspirational,” she said. “He achieved a lot within his lifetime and gave back to the community.”

Morales, a junior at NMSU, started the cover art in late December and completed the piece by mid-February. She worked closely with Craig Cully from the NMSU Art Department.

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