

Keeping up with the College

Dean's Message



As we get into the summer session, new courses start and the activity on campus increases. We are dealing statewide with the devastating effects of the fires, the lack of water and the continuous drought. All of these are impacting in many ways the activities and the land grant mission of the college of ACES. Given these effects and the ongoing impact of climate change, the college has taken seriously two very important areas that are closely related but independent fields of action.

The first of these is carbon management, and of course the other issue of great importance for all New Mexicans is water use and water management. In this issue, one of our scientists explains our ongoing work in

carbon management and how important it is to consider this work and its impacts.

In many parts of the world, agricultural products such as beef are being marketed as carbon neutral. This is something that we need to acknowledge and work on. We have been very successful in obtaining funds to do research in this area.

As we know, water is very critical for agriculture. Agriculture is the major user of water worldwide, averaging 70% of water used. In New Mexico, this number is about 80%. In the ACES college this is one of our four pillars – water management and conservation – and we consider these critical subjects. We will be presenting more water research and introducing the research concepts that our scientists are investigating all around the state.

All of this also points to the fact that in order to work with climate it is important to understand weather, and the state has trusted the college with 215 new weather stations over the next 2 years. This is not an easy task but one that we are assuming with full responsibility and looking forward to it. In this issue we will continue to look at advances in construction of the new buildings, and I invite anyone interested to visit and observe progress on this construction.

Ahh...water is flowing again in the Rio Grande, a great chance for “los cruceños” to cool down in its waters.

Thank you and stay cool.

Rolando A Flores Galarza
Dean & Chief Administrative Officer



Fires across the state have caused a lot of hardship for families and industry partners! If any ag producers are in need of assistance they should work through their local Farm Service Agency.

Contact for San Miguel County will be Linda Alcon at: 505-652-3230 (direct line) or via email: Linda.Alcon@usda.gov

USDA Farm Service Agency (FSA) offers assistance to agriculturalists impacted by wildfire – including multiple programs to help during recovery and to mitigate risk on your operation. [To learn more about your options and how to enroll, contact your county FSA agent. New Mexico's directory can be accessed online at https://www.fsa.usda.gov/contact-us](https://www.fsa.usda.gov/contact-us) under 'FSA County Offices'.

There are an array of options when looking to enroll to receive emergency relief payments. Some programs to inquire about include:

- [Emergency Relief Program \(ERP\)](#)
- [Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program \(ELAP\)](#)
- [Emergency haying and grazing of Conservation Reserve Program acres](#)
- [Livestock Forage Disaster Program \(LFP\)](#)
- [Livestock Indemnity Program \(LIP\)](#)

Details and further programs can be found at <https://www.farmers.gov/protection-recovery/wildfire>

SPECIAL INITIATIVES

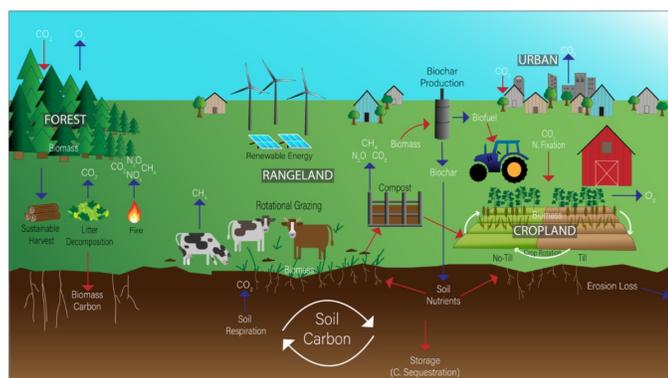
Carbon Management in Arid and Semi-Arid Environments

As the wildfires raging in New Mexico demonstrate, the need to find tools to reduce the impacts of climate change is imperative. Mitigating climate change while providing food and fiber to the growing population requires a significant shift in agriculture and other land uses. New Mexico State University emphasizes research, education, and extension activities on carbon management and sequestration for providing natural climate solutions to arid and semi-arid regions.

Enhancing carbon sequestration through improved cropland, rangeland, urban land, and forest management in arid and semi-arid regions can mitigate climate change. It also improves the food security of rural communities through increased crop and rangeland productivity, forest regeneration, and soil health improvements in degraded lands. Researchers in the College of ACES strive to demonstrate carbon sequestration practices in arid and semi-arid regions by establishing a network of experiments in science centers across the state, engaging stakeholders through a carbon literacy program, and training graduate and undergraduate students.

Our *more carbon per drop* approach emphasizes carbon sequestration and greenhouse gas mitigation while maximizing soil water storage. The U.S. Congress has recognized the value of the work of ACES by providing federal funding to support our vital research.

For more information please contact [Rajan Ghimire](mailto:rghimire@nmsu.edu) via email: rghimire@nmsu.edu





WATER FOR AGRICULTURE

Improving Access to Safe Drinking Water

Ongoing drought, climate change, and forest fires in New Mexico continue to raise interest in providing reliable access to safe drinking water. New Mexico State University ACES Water Science and Management doctoral student Leila Shadabi recently completed a research project in which she analyzed what factors are contributing most to protecting safe drinking water access worldwide. Leila's work was motivated by the fact that nearly one-quarter of the world's population lacks effective access to safe drinking water as well, which is also true for many New Mexicans in the state's rural areas. Worldwide, the discovery and implementation of affordable and working measures to supply safe affordable drinking water remains elusive. To date very few works have examined the full range of economic, policy, and government policy measures influencing that access.

To address these gaps in our previous understanding, Leila's exhaustive work investigated the role of a range of economic, policy, and hydrologic characteristics, all of which could contribute to explaining access to safe drinking water internationally. Leila built two predictors using data from 74 countries for the period 2012–2017. Her findings contribute to our understanding of what kinds of things most importantly influence access to safe drinking water.

She collaborated with Dr. Frank Ward, Distinguished Achievement Professor in the college of ACES. Their work will be published soon in the journal *Water Policy*.

For more information on Leila's work or for a copy of her work to be published, please contact [Frank A. Ward](mailto:Frank.A.Ward) via email: fward@nmsu.edu

4-H AND YOUTH DEVELOPMENT



NMSU Extension and Research Youth Agricultural Science Center

From March through May, 336 K–3 youth learned how to grow plants and painted pots for Mother's Day gifts through education provided at the New Mexico State University's Youth Agricultural Science Center (YASC) in Las Vegas, NM.

Since 2006, the YASC has been a growing partnership with the Las Vegas City Schools enhancing educational opportunities and outcomes for students. The mission of the center is to deliver educational programs in agricultural science. A basic premise of the mission is to develop a teaching and learning model of excellence that complements in-class instruction by providing



context to content through hands-on learning using a greenhouse and outdoor gardens. Center programs improve student's production-based agricultural competency and prepares them for postsecondary education in STEM careers. The Center reaches in excess of 600 youth annually.

For more information contact [Dr. Laura Bittner](mailto:lbittner@nmsu.edu) via email: lbittner@nmsu.edu

Written and verbal permission was given from parents to use this picture

AGRICULTURAL EXPERIMENT STATION

Clovis Agricultural Science Center International Research

Achieving the sustainable development goals of the United Nations requires the development of climate-smart and economically feasible approaches, specifically for smallholder farmers in developing countries. Rajan Ghimire, Clovis ASC researcher, co-authored a study that reviewed existing literature and provided an overview of farming practices in Nepal, highlighted near-term challenges associated with climate change and food security, and discussed conservation agriculture as a climate-smart strategy to improve food security.

The paper was published earlier in the Agronomy Journal (<https://acsess.onlinelibrary.wiley.com/doi/10.1002/agj2.20830>). The May issue of the CSA News featured a detailed story of the article "[Today's Challenges to Food Security for Smallholder Farmers \(wiley.com\)](https://acsess.onlinelibrary.wiley.com/doi/10.1002/agj2.20830)."



Typical farming systems in Terai (plain land) and the Mountains of Nepal.

FISH, WILDLIFE & CONSERVATION ECOLOGY

Backpacking/science adventure for underserved high school girls

After a COVID-induced pause, the GALS (Girls on outdoor Adventure for Leadership and Science) program is happening again this year! Lead by Professor Wiebke Boeing of FWCE and with the involvement of graduate students from NMSU and UTEP,

GALS is taking local high school girls on a 1-week trip to the Gila Wilderness. The group will visit the Gila Cliff Dwellings, take on leadership challenges, learn about science, talk about college and career challenges, be taught how to survive in the wilderness, conduct science projects, play games and relax in the Jordan Hot Springs, all while preparing presentations about their science projects for family, friends, and faculty.



GALS is sponsored by NMSU's Department of [Fish, Wildlife and Conservation Ecology](#), the College of Agricultural, Environmental, and Consumer Sciences, the Greater Federation of Woman's Clubs New Mexico and many private donors.

For more information, see <https://aces.nmsu.edu/gals/> or contact FWCE's Dr. Wiebke Boeing (wboeing@nmsu.edu) or Dr. Matthew Gommer (gompper@nmsu.edu)

HOTEL, RESTAURANT, AND TOURISM MANAGEMENT

Marriott Hospitality Futures Center (MHFC) at the School of Hotel, Restaurant and Tourism Management (HRTM) partnerships with Career and Technical Education Programs

HRTM partners with groups such as Distributive Education Clubs of America (DECA), Family, Career and Community Leaders of America (FCCLA), Business Professionals of America (BPA), ProStart and SkillsUSA that foster interest in related careers and develop skills to prepare students for higher education and the workplace. MHFC Program Coordinator, Andrea Arrigucci and other HRTM faculty, staff and students have contributed content and sponsorship for these groups in New Mexico, Texas and Arizona. This included travel to eight annual conferences where we have been able to serve as competition judges and discuss education and career possibilities with more than 2,500 students and 200 teachers.

It is incredible to see the hard work and dedication of these students as they prepare for competition and their team building within these organizations.

For more information contact [Jean Hertzman](#) via email: jhertzma@nmsu.edu



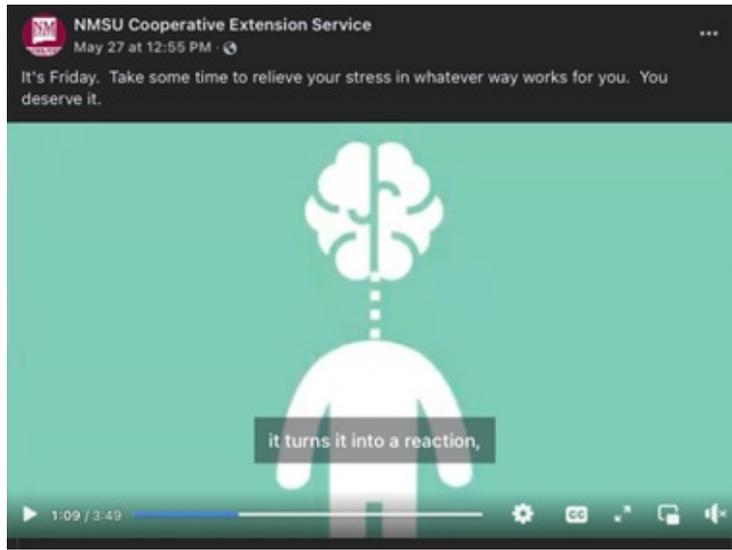
INNOVATIVE MEDIA RESEARCH AND EXTENSION

Innovative Media Research and Extension – Extension Social Media Campaigns

In addition to supporting the work of Extension educators in their social media work, the IMRE department has launched a new initiative to share content-specific information from three initial areas of Extension outreach. By the end of this year, the campaigns will highlight the work of many people in Extension in supporting mental health, providing guidance for life after

high school, and offering insight into New Mexico agriculture. Social media specialist Jeffrey Buras will be working with agents and specialists to create different posts, animated gifs, and images with research findings and recommendations across all three content areas.

If you would like to be involved in generating content for these three areas, contact Jeffrey at buras@nmsu.edu.



Extension accounts twitter.com/NMextension, [instagram.com/nmextension/](https://www.instagram.com/nmextension/) and [facebook.com/discoverNMSUextension](https://www.facebook.com/discoverNMSUextension) will be sharing the original content as it is ready.

ICAN-IDEAS FOR COOKING AND NUTRITION



ICAN Nutrition Educator Amie Steen presented mini lessons at the Chaves County Maze of Life May 4–6, 2022. This event was held for 8th graders in Chaves County and was hosted by the New Mexico Department of Health, the Chaves County Health Council, the Chaves County DWI Prevention Coalition, and other community organizations. The MAZE of Life event is an interactive life-sized game designed to expose teens to life events and/or circumstances in a safe environment so they can better understand the consequences (good and bad) of their decisions.



Amie was able to reach 874 youth at this event. She taught the *Rethink Your Drink* lesson which helps youth to make better choices when it comes to sugary beverages. Amie offered a sample of fruit infused water as an alternative to soft drinks, canned iced tea, bottled coffee, and energy drinks.

For more information contact Amie Steen via email: alsteen@nmsu.edu

PLANT AND ENVIRONMENTAL SCIENCES

NMSU Team Bio Luna wins “Most Innovative Experiment” in NASA’s Plant the Moon Challenge.



Team Bio Luna, led by Mikaela Hoellrich, Maya Gabitzsch, and Kaitlin Marry, won the award for Most Innovative Experiment in the Undergraduate/Professional Division of the Plant the Moon Challenge in May 2022. The team was made up of undergraduate and graduate students Karina Tovar, Ashley Riggs, Jonathan Consford, McKenzie Stock, and Ryan Salcido with faculty advisors Drs. Nicole Pietrasiak and April Ulery from the [Department of Plant and Environmental Sciences](#).

The competition is linked to NASA Artemis' near future mission to return to the moon requiring astronauts to spend a considerable amount of time in space necessitating the availability of healthy food for the crew over a long period. Sustainable plant production on the moon could help optimize logistics and economics of the mission. The team's objective was to design and conduct space biological research to test a variety of experimental conditions in which to grow healthy and nutritious food in simulated moon soil or 'regolith'.

For more information contact Dr. Nicole Pietrasiak via email: npietras@nmsu.edu or Dr. April Ulery via email: aulery@nmsu.edu.

2022 BEEF IMPROVEMENT FEDERATION SYMPOSIUM

2022 Beef Improvement Federation Symposium comes to Las Cruces

New Mexico State University hosted the 2022 Beef Improvement Federation Symposium at the Las Cruces Convention Center from June 1st through June 3rd. Since its inception in 1968, the BIF organization has played a key role in guiding beef producers worldwide towards genetic improvement and management efficiency.

Over 300 people, from seven countries and 25 plus states participated in this year's event. The symposium started out with a tour of the Santa Teresa Livestock Border Crossing. One-hundred and twenty-four people attended the tour. Dina Chacon-Reitzel of the NM Beef Council and Board of Regents member provided welcoming comments at Wednesday's opening reception followed by NMSU's College of ACES' Dean Flores on Thursday. From there the theme revolved around how the beef industry is going to address environmental challenges, and customer perception of the industries contribution to these challenges. On Friday, focus shifted to trade. Speakers informed the group of where demand is shifting internationally, and how the US will play a role.

New Mexico State University was well represented at the conference, with Dr. Craig Gifford (EANRS), Dr. Eric Scholljegerdes, and Dr. Derek Bailey (ANRS), all speaking in breakout sessions. Several graduate students also helped and attended the symposium. Retired Animal and Range Science department head, Dr. Bobby Rankin was honored on Friday with the BIF Pioneer award, for his contribution to the genetic improvement of cattle in the southwest and his development of the Tucumcari Bull Test.

For more information contact [Dr. Marcy Ward](#) via email: maward@nmsu.edu



ADVANCES ON THE NEW AG BUILDINGS TO DATE



Biomedical Research Center



Food Science, Security, and Safety Facility



Animal Nutrition and Feed Manufacturing Facility

To view a live progress of the construction click on the link below:

[NMSU: ACES | About - WebCam](#)

NEW HIRES OF THE COLLEGE

April, 2022

- Mikah Kahiu 04/01/2022
- Kimberly Rodriguez 04/01/2022
- Israel Chavez 04/01/2022
- Lydia Duran 04/04/2022
- Monica Holguin 04/04/2022
- Jeremy Alder 04/06/2022
- Chelsea Canon 04/11/2022

- Anna Davis 04/18/2022
- Lucas Begeman 04/18/2022
- Ulises Sanchez Sandoval 04/18/2022
- Daniel Gordon 04/25/2022

May, 2022

- Corey B. Benally 05/02/2022
- Carlos Aguirre 05/09/2022
- Sarah E. Daman 05/15/2022
- Gabriel E. Ortiz 05/15/2022
- Tamara Lopez 05/16/2022
- William Robbins 05/16/2022
- Jarrah A. Medina 05/16/2022
- Tammie D. Sanders 05/16/2022
- Elisa Anderson 05/18/2022
- Taylor L'Heureux 05/23/2022

PLANT AND ENVIRONMENTAL SCIENCES-NEWSLETTER

College of Agricultural, Consumer and Environmental Sciences

Summer 2022 Newsletter

Department of Plant and Environmental Sciences | <https://aces.nmsu.edu/academics/pes/>

Phone: (575) 646-3405 - Email: pesadmin@nmsu.edu

June 2, 2022

Introduction

On May 6th, 2022, we celebrated the graduation of twenty-four undergraduates and four graduate students from the department. This graduating class excelled in the face of the challenges that the pandemic brought. In this newsletter, you will notice that one of our students was recognized as the NMSU Alumni Association Outstanding Undergraduate Student and another was recognized as an Outstanding Undergraduate Horticulture Student by the American Society for Horticultural Science. After graduating from the department, our students will be engaged in activities that will range from working at national labs to pursuing their graduate education in the department and at other institutions. I know our graduates will do well. On page two of this newsletter, you can catch up on some of the activities of our former students. I am always delighted to learn of the outstanding accomplishments of our alumni.

In this newsletter, you will notice that our current students and faculty are engaged in co-curricular activities. HortForum students had a successful trip to Tucson and the students raised part of the funds needed to support their participation in this co-curricular activity. Our Soils Judging Team competed at National Soil Judging competition at The Ohio State University from April 19th to 23rd. Students on our Horticulture Judging team are in the middle of their preparations for participation in the National Horticulture Judging Competition which will be held from July 2nd to July 9th in Las Vegas, Nevada.

Our group of faculty and students who participated in NASA's Plant the Moon Challenge won the Most Innovative Experiment Award. Briefly, the Plant the Moon Challenge is a NASA-sponsored international science competition. The objective of the competition is to grow crops in lunar highland simulated substrate to make the moon soil habitable. I encourage you to read about this fascinating story on page five.

In speaking of student competitions and co-curricular activities, I thank our faculty and staff who spend many hours mentoring and coaching our students. I also thank our alumni, friends, and supporters of the department who provide financial and other resources in support our student activities.

Department Head



Rolston S. McLeane

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CHALLENGE

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Experiment: page 5



American Society for
Horticultural Science

PES Students Win Travel and
Academic Awards from ASHS:
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Student Awards and
Graduation: page 7

BE BOLD. Shape the Future. | New Mexico State University

To view the Summer 2022 Newsletter from the [Department of Plant and Environmental Sciences](#)
click on the link below:

[Summer 2022 Newsletter \(lucidpress.com\)](https://lucidpress.com)



ACES Magazine Spring 2022 Issue 7

[View & Download](#)

For available vacant positions in the College of ACES, please visit,
[New Mexico State University Applicant Portal | Home \(nmsu.edu\)](#)

The College of Agriculture, Consumer and Environmental Sciences is an engine for economic and community development in New Mexico, improving the lives of New Mexicans through academic, research, and Extension programs.



**College of Agricultural, Consumer
and Environmental Sciences**
New Mexico State University

