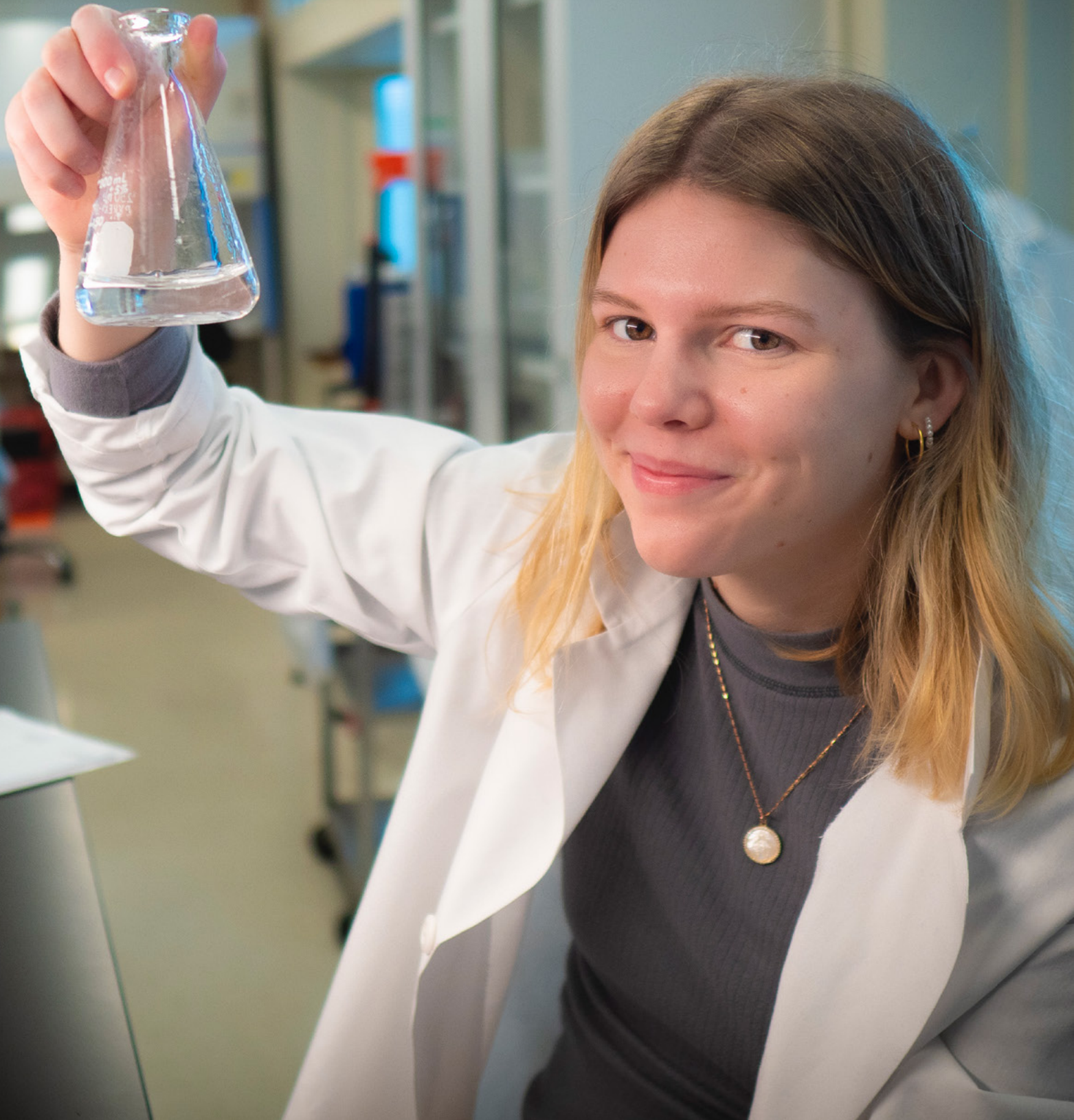


COWPOKE

NEWS

*Department of Animal & Food Sciences
Oklahoma State University
Spring 2021*



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On the Cover:

Adelle Crofford conducting reasearch is shown on the front and back covers of this edition. Adelle is an undergraduate student and Niblack Research Scholar conducting research in Darren Hagen's lab.

Read about undergraduate research opportunities on page 8 of this edition. Photos by Todd Johnson.



COWPOKE NEWS

Welcome to the Spring 2021 Edition of Cowpoke News! We hope you enjoy reading about the Oklahoma State University Department of Animal and Food Sciences.

Cowpoke News is published multiple times a year. We strive to keep students, alumni, and friends of the department informed about our activities and successes. Cowpoke News is distributed through both e-mail and mail and is available 24/7 at afs.okstate.edu/cowpoke-news. To subscribe, e-mail us at cowpokeneews@okstate.edu or mail in your request. Please give us your full name and either your e-mail or mailing address.

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Around the Department

Lab remodel updates animal science research space

An animal science research lab in the OSU Noble Research Center has been newly remodeled. The lab will include movable benches, which is part of OSU's new design for its shared research labs.

The lab houses Janeen Salak-Johnson and Darren Hagen, faculty researchers from the OSU Department of Animal and Food Sciences.

Salak-Johnson's research focuses on the environmental adaptability of domestic animals and minimizing stress in animal production environments in order to improve animal well-being, health and productivity of farm animals.

Hagen's research focuses on animal genomics, including genome sequence analysis and functional annotation, as well as the development of models and algorithms to better classify functional interactions.



G-Rise Grant

NIH intends to fund a G-Rise Grant at Oklahoma State University. This monumental grant includes approximately 50 researcher faculty members from multiple colleges across the OSU Campus. We are pleased to have the following faculty members included in this grant: **Adel Pezeshki, Janeen Salak-Johnson, Leon Spicer and Glenn Zhang.**

Visiting Scientist

Mariano Menghini is a visiting scientist from Universidad Nacional del Sur. He is currently conducting research with Ryan Reuter, animal science associate professor. Reuter's research focuses on precision management of grazing systems through application of next-generation technology and data analytics.

Scholarship Pageant

Xin Mei Teng is a food science major in the OSU Department of Animal and Food Sciences. On April 10th, 2021, she won the People's Choice award in the Miss Asian OSU Scholarship Pageant.

Retirements and New Hires

Karen Miller retired from our accounting department in May of 2021. She had been a part of our team for over six and a half years.

Kristy Jones joined our accounting team in April of 2021. Welcome Kristy!

For many years **Glenn Selk**, emeritus professor, worked part-time to help create the Cow-Calf Corner segment on the show SUNUP. He officially left the position in February of 2021. We appreciate Selk and all of the work he has done for our department! Mark Johnson, professor, has taken on the duties for the Cow-Calf Corner segment.

We are looking for an **Accountant I** to join our team! This position will serve as a member of our financial office to support a variety of accounting activities with a primary focus on grants. Learn more or apply online at <https://bit.ly/3t95Ro6>.

Oklahoma State's Animal Science Quadrathlon Team named Reserve Champions

North Carolina State University hosted the 2021 regional academic quadrathlon competition on January 23rd and 24th for the Southern Section of the American Society of Animal Science. Although the two-day contest was held virtually this year, there was still strong participation from across the region.

Oklahoma State turned in a strong performance in the competition and came up only one point shy in the rankings from winning the contest. OSU was named the 2021 Reserve Champion team, finishing 2nd in the lab practicum, 1st in the oral presentation, 3rd in the written exam and 1st in the quiz bowl.

This is the best performance by an OSU quadrathlon team since the 2015 regional champion team and only the second time since 2015 that OSU has won two of the four events in the same contest.

The 2021 team representing OSU at the regional contest was made up of Shannon Greenwald, Brandon Herzog, Carlee Salisbury and Megan Wasson (pictured).

The OSU Animal Science Quadrathlon Team is coached by Blake Wilson and Brittany Lippy. Other team members

who participated in the local quadrathlon competition include Braden Alwert, Jim Bodrgerding, Savanna Dockins, Erica Nightengale and Taylor Paul.



Research begins at new Animal Nutrition and Physiology Research Center

Some donors, faculty and administrators had the opportunity to tour the new OSU Animal Nutrition and Physiology Research Center west of campus. The facility now houses our department's poultry research, as well as some of our cattle, swine and sheep research.

The state-of-the-art facility includes: 16 metabolism stalls used frequently for cow-calf pairs in physiology studies, small surgery room, dry and wet labs and a cattle working areas with chutes, stalls and pens.

The facility is dedicated to conducting animal studies related to climate variability, production efficiency and sustainability in the areas of:

- Animal and Human Health
- Genetics
- Growth
- Nutrition
- Reproduction
- General well-being

Faculty members Glenn Zhang and Andrew Foote are pictured providing a tour of the facility.

Ranjith Ramanathan recognized for teaching achievements

Ranjith Ramanathan was selected as the OSU Ferguson College of Agriculture's recipient of the 2020 Regents Distinguished Teaching Award!

Ramanathan is an associate professor specializing in food science. He currently teaches both undergraduate and graduate-level courses, including the fundamentals of food science, food chemistry I, food chemistry II, analysis of food products and advanced meat science. His teaching interests include active learning, student retention and high-risk students.

"I believe education is one of the ways individuals can become independent and achieve a successful career," Ramanathan said. "Teaching helps me as an instructor to share my knowledge and learn more about the subject, as learning is a lifelong

process. Teaching provides me with a sense of fulfillment when my students apply the concepts they learn in the classroom to make a difference in society."

Ramanathan is well-known for his teaching abilities and is a favorite amongst students. During his academic career, Ramanathan has received over 20 awards and honors for his teaching and research efforts, advised 90+ undergraduate students and mentored 30+ undergraduate research scholars.

"I often use student-centric teaching," Ramanathan said. "I love to know students' needs and why they took my course. I believe once you understand students' needs, it is easy to connect with students and provide ownership in what they learn."

In addition to the 2020 Regents Distinguished Teaching Award,


Ramanathan was honored at the 2021 OSU University Awards Convocation with the Regents Distinguished Teaching Award and the Distinguished Early Career Faculty Award.

"It is always exciting to see when students understand and connect to real-world problems," Ramanathan said. "It's exciting to see some students pursue graduate studies and eventually leading some programs that help with food industry."

Ramanathan truly enjoys teaching and seeing his students go on to be successful in their careers.

"My personal experience indicates that instructors who are dedicated, passionate and caring can impact students' lives by building character traits that will serve them in their future professional and personal lives."

Written by Rebekah Alford

A portrait of Ranjith Ramanathan, a man with dark hair and a light beard, wearing a dark suit jacket over a light-colored striped shirt. He is looking slightly to the right of the camera with a neutral expression. The background is a blurred outdoor setting with green foliage.

Ramanathan has the Leo And Kathy Noltensmeyer Endowed Professorship and is the research coordinator for the Oklahoma State University Department of Animal and Food Sciences.

He has received numerous awards for his teaching and research efforts.

Ryan Reuter receives award for impactful research

Ryan Reuter was selected to receive the 2021 President's Fellows Faculty Research Award. This award is part of a local grant program which seeks to support important and impactful research by Oklahoma State University faculty.

Reuter is an associate professor in the OSU Department of Animal and Food Sciences. His research focuses on improving sustainability of grazing-based beef cattle production systems.

"I was raised in Oklahoma in a grazing cattle operation," Reuter said. "My father still operates it today. He is the 3rd generation of our family on that land. That story is extremely common across rural communities in Oklahoma and the U.S. I want to do what I can to help these operations continue successfully into the future."

His research works to find solutions that simultaneously address efficiency, profitability and logistical challenges.

This includes investigations into how supplementation strategies and methods can be used to more precisely supplement grazing animals.

"My research currently is focused on using precision management technology in grazing systems," Reuter said. "These include on-animal sensors to measure behavior, automated supplementation of cattle and virtual fencing. All of these precision approaches have the goal of improving sustainability, which includes not only improving the environmental aspects of grazing management, but also the economic and quality-of-life aspects for both ranchers and consumers."

As part of these experiments, he also looks for ways new technology can be applied to improve management of grazing systems. This includes developing data analysis algorithms to interpret collected data.

The main project the grant will fund is an investigation to better understand how multi-species grazers use cover crops.

"Diverse mixtures of cover crops are being used to improve soil health in our cropping systems, and they are often grazed," Reuter said. "But, currently, there isn't much information about how cattle and goats differ in what plants they will select, how much they will voluntarily consume and how much weight they can gain."

Reuter was surprised but very pleased when he learned he received the award.

"It is quite an honor to be selected from among all of the talented people that work at OSU," Reuter said. "I'm really appreciative to all the donors over time who funded the award as an investment in Oklahoma's future."

Written by Rebekah Alford

Reuter has the George Chiga Endowed Professorship and is an associate professor for the Oklahoma State University Department of Animal and Food Sciences.

His emphasis is in range beef cattle nutrition. His research interests include forage-based beef cattle nutrition and management, and incorporating precision management technology into grazing systems.





Endowment boosts undergraduate research opportunities

When Adelle Crofford visited the OSU Department of Animal and Food Sciences during her senior year in high school, she had never thought of conducting research as an undergraduate student. One of the things the department takes pride in is having a well-structured Undergraduate Research Scholar program.

Mellissa Crosswhite, faculty in the department who visits with prospective students, said, "The Undergraduate Research Scholar program allows students to understand how research is conducted and to know about additional career opportunities."

The program's goal is to provide undergraduate students with hands-on research experience alongside faculty, graduate students, technicians and herd managers. Any students in the department who have above a 3.0 GPA are eligible to apply to the

program. The students are paid for up to four hours of research related work per week.

Upon retirement, Gerald Horn and Bob Wettemann were selected as the 2018 Totusek Arena Hall of Fame Chairback Honorees by the OSU Animal Science Alumni Association. In conjunction with the ASAA, an endowment was established to support undergraduate research scholars in the department.

"The purpose of the endowment is to provide a focus for supporting hands-on research by undergraduate students and to enrich the overall experience by enabling students to travel to scientific meetings for the presentation of their research and to network with faculty and students from other universities," said Horn.

The department has received continued support to the program through the endowment. Last year,

Steve Armbruster and his wife, Patty, made a gift to the endowment to support undergraduate student and faculty research needs. Providing research opportunities for students and conducting cutting-edge research is expensive. The gifts from Armbruster will help to address additional needs, such as laboratory and/or animal supplies, publication and printing costs for student research projects and student travel to scientific meetings for the presentation of their research or to visit locations to learn specific research techniques.

Maddy Scott (pictured) is a food science undergraduate student and recipient of both the endowment and a Wentz research scholarship. She plans to pursue graduate studies in meat science at OSU after completion of her undergraduate studies. Her research focuses on understanding the factors affecting beef discoloration.

"I am extremely grateful for the opportunities the Undergraduate Research Scholars program has given me," Scott said. "I am able to gain hands-on, real-world experience I know will serve me well in the future."

Andrew Foote, an assistant professor who mentors undergraduate researchers, said, "These funds allow me to reward and recognize our brightest and hardest working students for the tremendous effort they provide to my research program."

The Undergraduate Research Scholar program has benefited more than 80 students in the past five years. Approximately 85% of students who participated in this program pursued graduate studies or professional school.

Darren Hagen, assistant professor in animal science computational genomics, said, "For my program, it's maybe not about the money, but more about knowing undergraduate research and mentorship has the

support from those who came before you."

The students also appreciate the opportunity to know more about research and to know about faculty. Adelle Crofford said, "I am so grateful to the incredible faculty here for showing me the strides we have been able to make in so many fields, and I am proud to be a part of continuing projects!"

Several students who participated in this program presented their research at national and international conferences and have won undergraduate research competitions. Wettemann, who has several decades of mentoring experience, said, "Research is exciting and fun, so undergraduates should become involved in science to prepare for careers."

Dan Stein and Ranjith Ramanathan coordinate the program. Glynn Worley, an administrative assistant in the department, helps with the

program and provides necessary resources to keep track of student hours and progress reports.

The visionary decisions made by Armbruster, Horn and Wettemann to support the next-generation workforce in the animal and food industry will have an everlasting impact on our department and its students.

Additional assistance is needed to meet research expenses and continue to grow the Undergraduate Research Scholar program endowment. If interested in making a contribution to the endowment, please visit www.OSUgiving.com and search for 'Animal and Food Sciences Undergraduate Research Scholars Program Endowment.' For questions about donating, contact Megan Smith at the OSU Foundation, 405.385.0743 or mesmith@osugiving.com.

Written by Ranjith Ramanathan

Research Impact

The students and faculty listed below will benefit from the continued support of endowment thanks to the vision and contribution of donors.

Undergraduate Research Scholar Program Fund:

- Adelle Crofford
- Carlee Salisbury
- Maddie May
- Madelyn Scott
- Hunter McConnell

Faculty Research Support Fund:

- Darren Hagen
- Andrew Foote
- Adel Pezeshki
- Ranjith Ramanathan



Pictured (From left): Bob Wettemann, Patty and Steve Armbruster and Gerald Horn.



Oklahoma State livestock researchers awarded two \$200,000 national grants

Researchers with Oklahoma State University's Division of Agricultural Sciences and Natural Resources have been awarded two National Institute of Food and Agriculture grants aimed at improving the sustainability of livestock producers.

A \$200,000 NIFA grant will enable Oklahoma State scientists to study the role of glucose metabolism in the regulation of feed intake and nutrient-use efficiency of beef cattle.

"This research aims to determine what makes some cattle more efficient in turning feed into beef than other cattle," said lead investigator Andrew Foote, an assistant professor of ruminant nutritional physiology in the OSU Department of Animal and Food Sciences.

The greatest cost in beef production is feed. However, beef cattle producers are unable to select animals for optimal feed intake, unlike many other traits. The amount of feed that cattle consume when given unlimited access is not consistent, making it difficult to predict feed consumption accurately.

"We think the way cattle use glucose for muscle growth is one of the critical

reasons that some cattle are more efficient at utilizing feed," Foote said. "The ability to genetically select for optimal feed intake will improve the economics of beef operations by reducing the cost of production. Optimizing feed intake also will minimize the environmental impact of beef production by reducing the excretion of nutrients that are not used by the cattle."

Maximizing feed resources is a key element of growing healthy swine profitably.

In addition to Foote, primary Oklahoma State researchers on the project include Darren Hagen, assistant professor of animal genomics, and Steve Hartson, research associate professor in the OSU Department of Biochemistry and Molecular Biology.

A second \$200,000 NIFA grant will be used to study growth performance, nutrient utilization and gut microbials in pigs fed low-protein diets supplemented with the amino acids isoleucine and valine.

Increased feed costs – together with environmental factors associated with swine production – underscore

the importance in developing cost-effective solutions to improve feed efficiency and decrease excretion of nutrients, said lead investigator Adel Pezeshki, an assistant professor and researcher in the OSU Department of Animal and Food Sciences.

Understanding the mechanisms by which isoleucine and valine promote the performance of animals may lead to more effective strategies to enhance productivity, which could have major implications for swine operation profitability.

Animal scientist Darren Hagen is working on Pezeshki's study as well as Foote's research project.

OSU Ag Research accounts for about a third of all research conducted at Oklahoma State and about 85% of research royalties that flow back into the university.

Both OSU grants are part of NIFA's Agriculture and Food Research Initiative. NIFA was created through the Food, Conservation and Energy Act of 2008. It is part of the U.S. Department of Agriculture.

Written by Donald Stotts

Getting an orphan foal to nurse an immediate need

An orphan foal still needs another mare or a person to provide milk and care, especially during the first vital days of life.

“The most immediate need for foals orphaned at birth is getting the animal colostrum within 24 hours after birth,” said Kris Hiney, Oklahoma State University Extension equine specialist. “Since antibody transfer normally occurs when a foal nurses on its dam’s colostrum, another source must be found.”

Foals should be administered about four pints of colostrum in one-pint increments within the first day, and antibody tests should be performed on the orphan foal within 18-24 hours after birth. If the antibody count is low, a plasma transfusion will be necessary.

Whether a foal is orphaned immediately or is orphaned before the age of weaning, the horse manager must get the foal on some type of milk diet as quickly as possible. Some producers have successfully used other mares as foster mothers. In those cases, the mare not only must accept the foal nursing on her but be synchronized in her lactation as well.

“Mares that have recently lost their own foal may be the most likely candidate,” Hiney said. “A small percentage of mares will allow other foals to nurse them. Mares can respond to unknown foals – and sometimes even their own – quite aggressively, so the horse manager usually will need to try different methods to get the mare to accept the foal.”

Some owners have rubbed the foal with the foster mare’s feces, milk or sweat to help the mare accept the foal as her own. Others have put some type of vapor rub ointment around the mare’s nose to interfere with the foal’s odor and, in essence, trick the mare. The same ointment may be placed

on the foal. Sedation or hormones also may assist with the mare-foal bonding. The latter are referred to as exogenous hormones, as they come from medication instead of being produced inside the body.

“Be aware the mare may need to be restrained the first few times the foal nurses,” Hiney said.

The horse manager must closely observe the foal and mare for the first few days. If the mare accepts or rejects the foal, it will typically be during this period. A foal that is rejected will have to be fed by bottle until it can be fed from a bucket or trough.

Even if the mare accepts the foal, the horse manager may still need to use a supplemental milk source. Consumption by foals will vary widely; it is not unusual for a 100-pound foal to consume 20 pints per day. Commercially available, protein-based milk replacers formulated for foals should be used, Hiney said. Do not use cow’s milk.

A common method of providing a supplemental milk source is with a bucket – with or without a nipple attachment, such as that used with

lambs. The foal may have to be trained in using the nipple; however, once the foal is comfortable with the device, the animal will drink on its own. The foal should drink frequently throughout the day.

Once the foal is used to drinking, the horse manager can hang the bucket on the wall at the foal’s shoulder height and refill the bucket as needed. The bucket will likely need to be filled three or four times a day, although the exact number will vary according to the individual foal. At one or two months of age, the foal will need continual, free access to a milk source.

“The horse manager can get the foal on milk-replacer pellets as well,” Hiney said. “Start them eating feed relatively early. This will reduce the time spent providing them with liquid milk. Also, keep a close watch for signs of illness, digestive upset and continued growth.”

Fact sheets detailing research-based information about best management practices for foals and young horses are available online and through OSU Extension county offices.

Written by Donald Stotts



Preparation key in herd sire selection

Cattle producers may be feeling they're back in school again, given the amount of homework required to determine what they need in a new herd sire.

"Purchasing a new bull is one of the most important choices a cattle breeder makes in terms of operational profitability," said Paul Beck, Oklahoma State University Extension beef cattle specialist. "Before attending a sale, the producer needs to determine his or her operational goals and come up with criteria about the type of herd sire required to accomplish these objectives."

- Key questions to ask will include:
- Is there a particular genetic change that needs to be instilled in the herd?
- Are the daughters of the bulls going to be kept as replacement heifers?
- How much growth rate will be desired in the calf crop?
- What bull sellers have already produced the type of herd sires desired?

- When will the calf crop be marketed?
- What economic and management resources will be required?

Breeders may narrow down their bull purchase options by reviewing sale catalog information such as Expected Progeny Differences, or EPDs, a calculated estimate of a bull's future offspring value relative to another sire within a breed. The buyer should make the breed choice first and then study performance data.

Mark Johnson, OSU Extension beef cattle specialist, recently provided insights into the use of EPDs in selecting the right bull on the agriculture television show SUNUP. Beck and Johnson are faculty members in the OSU Department of Animal and Food Sciences.

"Many sire summaries provide information on about 20 genetic predictors, ranging from calving ease and maternal performance in the bull's female offspring to factors that impact carcass traits such as marbling, ribeye size and fat thickness," Johnson said. "While almost all of the predictors

will have an effect on a herd, only a relative few will have a significant impact on operational profitability."

Biometric indexes are a key part of most sire summaries. These are a selection of traits that inform the buyer of potential profit and loss expectations should the producer retain ownership through the finishing aspect of raising cattle.

Additional OSU Extension recommendations are to:

- Look for uniformity in EPDs.
- Do a visual appraisal of the potential herd sires selected from the catalog.
- Speak with the bull's breeder. One of the best ways to enhance quality assurance beyond the numbers is by asking questions directly.

Remember that a breeding bull has a prime period of life. They need to be sound, fit and athletic to cover terrain and settle cows and replacement heifers. Bulls past the age of six are more likely to suffer physical breakdown.

Research indicates a general rule-of-thumb for the number of cows and replacement heifers a bull should be expected to cover in a breeding season:

- A 12-month-old bull – about 12 females in his first breeding season.
- An 18-month-old bull – about 18 or 19 females.
- A 2-year-old bull – up to 25 cows or replacement heifers.
- A mature bull – 25 to 35 females per season.

Fact sheets detailing research-based information about herd sire selection and cattle herd management practices are available online and through OSU Extension county offices.



Written by Donald Stotts

New student group focuses on ranch horses

The Oklahoma State University Ranch Horse Team is a new student organization which promotes the versatile ranch horse culture. The group strives to equip its members with the leadership skills they may need in the equine industry. The team is focused on industry networking while also representing OSU at collegiate ranch horse competitions.

Marissa Chapa, herd manager of the OSU Cline Equine Teaching Center, is serving as advisor and coach for the new team. The members meet weekly to learn new skills, attend events and participate in networking opportunities.

“The industry networking side includes working with sponsors, clinicians, ranch/stallion tours and attending industry events,” Chapa said. Members can also represent OSU in ranch horse competitions around the country.

“Students interested in competing will show in ranch riding, ranch trail, reining and working cow horse at collegiate affiliated shows,” Chapa said.

Megan Newlon helped found the team and is serving as its first president. Growing up in Kansas, horses were always a large part of her life. She started off showing all-around horses through 4-H and AQHA, then became very involved in competing in ranch horse events during high school.

“I’ve grown passionate about these horses because although they are still participating in a show environment, the competition simulates that of a working ranch horse,” Newlon said. “For example, the ideal ranch horse must be versatile enough to work cattle, capable of opening gates and suitable enough to ride across the pasture. These traits are tested in the ranch horse competitions in events such as working cow horse, reining, ranch trail and ranch riding.”

When looking at potential universities to attend, Newlon hoped to find one with a collegiate ranch horse team. She almost went to a different school because OSU didn’t have a team, but OSU’s academic and equine programs won her over, Newlon said.

“Over the past 20 years, collegiate ranch horse teams have been rapidly developing all across the country,” Newlon said. “I finally decided to attend OSU and told myself I would just start a team here for students in the future to have the opportunity to earn a great education all while being involved extracurricularly.”

Anyone interested in the team can reach out to them on Campus Link, message them on Facebook or Instagram at OSU Ranch Horse Team or simply reach out to any of the members or the advisor.

Written by Rebekah Alford





2021 Livestock Judging Team

The Oklahoma State University Livestock Judging Team was blessed by much success in a spring season full of uncertainty due to the COVID-19 pandemic. Most importantly, we would like to thank those who supported us. From state leadership and families that made judging contests possible, to operations, alumni and friends, we know our success is thanks to our avid support system. I am honored to lead the livestock judging team here at OSU. The support of the alumni is unparalleled.

The team started the year by being named reserve high team overall at Cattlemen's Congress in Oklahoma City, Oklahoma. The team was also high team in reasons and second high team in the cattle, sheep and goats and swine divisions. Mattie Haynes of Jay, Oklahoma, finished as the second high individual overall and in the reasons division. Tanner Walden from Tonganoxie, Kansas, was high individual in the swine division, sixth in reasons and sixth high individual overall. Ty Taylor of Vinita, Oklahoma, finished ninth overall and tenth in reasons. Phoebe Rogers from Hennessey, Oklahoma, was third high individual in the reasons division and fifth in swine. Calvin Johnson, also from Vinita, Oklahoma, finished eighth in sheep and goats.

In February, the Cowboys had a dominant showing in Abilene, Texas, at The Patriot where they were named the Champion Team Overall and had six individuals place in the top ten. This included second high individual Mattie Haynes, third high individual Tanner Walden, fifth high individual Macey Goretska, seventh high individual Grace Harris, eighth high individual Phoebe Rogers and tenth high individual Jacob Bedell.

The following weekend traveling amidst a snow storm, the cowboys found more success in Jackson, Mississippi. They finished as the Champion Team Overall at the Dixie National. Macey Goretska of Abilene, Texas, won both the reasons division and high individual overall. Calvin Johnson was third in reasons and overall. Mattie Haynes, Tanner Walden and Luke Sharp were fifth, sixth and tenth high individual, respectively.

At the San Antonio Livestock Exposition, the team had another tremendous outing. OSU was the champion of the reasons, cattle and sheep divisions, resulting in high team overall. Tanner Walden led the team with a stellar 21 point win for high individual overall, as well as in the reasons, cattle and sheep divisions.

Macey Goretska was second in cattle and reasons and seventh overall.

Johnna Stottlemire of Luther, Oklahoma, and Natally Owen of Oklahoma City, Oklahoma, finished sixth in the sheep and goat division, respectively.

Lastly, the team competed at the Houston Livestock Show and finished as the third high team overall. Tanner Walden, yet again, had another exceptional showing as the second high individual overall and high individual in the reasons and sheep and goats divisions. In the alternates contest, Blair Cupps of Burlington, Kentucky, and Johnna Stottlemire and Danielle Nading of Fort Scott, Kansas, finished second, third and fifth overall, respectively.

I am fortunate to have a talented group of students on the 2021 team. I am proud of their success this spring, but I am excited for fall. We are humbled by the success and support thus far, but even more eager to continue working diligently and see what is to come. As always, go pokes!

*Written by Parker Henley,
OSU Livestock Judging Coach*

LIVESTOCK JUDGING CAMP

2021



3 DAYS | ONE-ON-ONE REASONS COACHING

Summer 2021 sessions

**Session 1:
June 7-9**

...

**Session 2:
June 10-12**



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For registration information visit: <https://extension.okstate.edu/programs/youth-livestock/index.html>

Awards & Recognition

OSU Ferguson College of Agriculture 2021 Seniors of Distinction

Each spring, the OSU Ferguson College of Agriculture honors seniors for their hard work and dedication to academics, leadership, research and service. This year, five undergraduate students from the OSU Department of Animal and Food Sciences were chosen as 2021 Seniors of Distinction by the college.

Congratulations to Braeden Coon, Mandy Lawson, Alexis Main, Cathy Mapes and Megan Wasson for this great accomplishment!

- Braeden Coon from Mountain View, Oklahoma, is majoring in animal science and agricultural communications.
- Mandy Lawson from Coweta, Oklahoma, is majoring in animal science.
- Alexis Main from Modesto, California, is majoring in animal science.
- Cathy Mapes from Alva, Oklahoma, is majoring in animal science.
- Megan Wasson from Salinas, California, is majoring in animal science.

2021 OSU Virtual Research Symposium

The OSU Robert M. Kerr Food and Agricultural Products Center held its 2021 Research Symposium via Zoom. The symposium included oral presentations of undergraduate and graduate student research. The keynote address was given by Jason Reicks of Florida Food Products Inc., who discussed natural curing meats. The OSU Department of Animal and Food Sciences had students who participated in the symposium.

Caitlin Karolenko received first place in the graduate student division. She is pursuing her Ph.D. in food science and is mentored by Peter Muriana. Her presentation was titled, "Use of alternative salts in biltong marinade to reduce sodium and still achieve USDA-FSIS >5-log reduction of salmonella."

Morgan Denzer tied for third place in the graduate student division. She is pursuing her Ph.D. in food science and is mentored by Ranjith Ramanathan. Her presentation was titled, "Dark storage of enhanced dark-cutting beef in nitrite-embedded packaging increased metmyoglobin formation upon repackaging."

Learn more about their presentations online at <https://food.okstate.edu/training-and-services/2021-virtual-research-symposium-presentations.html>.



Pictured (From left): Caitlin Karolenko and Morgan Denzer.

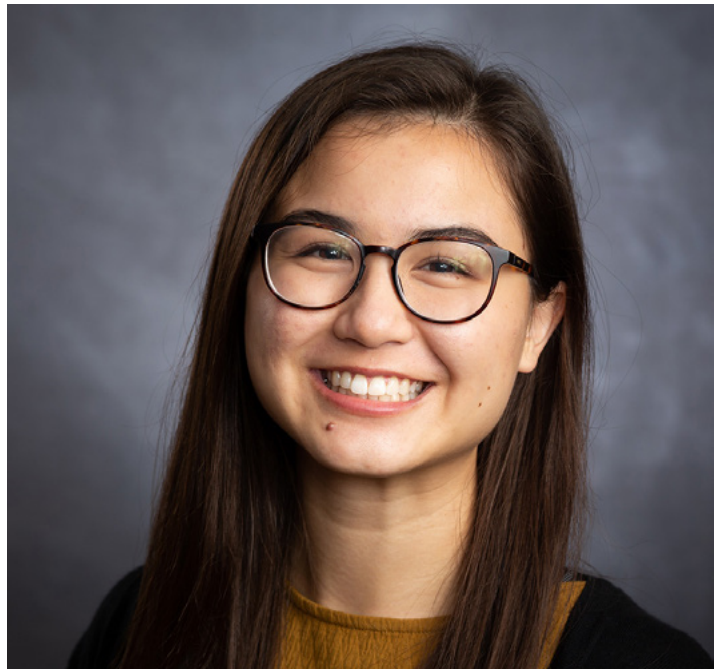
Goldwater Scholarship

Ashley Gin is one of three OSU undergraduate students selected to receive the 2021 Barry M. Goldwater Scholarship. She is majoring in biochemistry and molecular biology with a pre-veterinary science option and a minor in mathematics.

Gin's research mentor is Glenn Zhang from the OSU Department of Animal and Food Sciences. She is the second undergraduate student working in Zhang's lab to receive this prestigious scholarship.

"The Goldwater is a very prestigious national level scholarship," Ranjith Ramanathan said. Ramanathan serves as the research coordinator for the OSU Department of Animal and Food Sciences. "To get back-to-back Goldwater from the same lab is very remarkable."

While at OSU, Gin has been a Freshman Research Scholar, Wentz Research Scholar and Niblack Research Scholar. All are competitive programs. Her research projects focus on poultry and human innate immunology and therapeutic investigation.



Graduate Student receives USDA Predoctoral Fellowship

Melanie Whitmore, an animal science Ph.D. student, has received the 2021 USDA Predoctoral Fellowship. This is a national-level, highly competitive award and is worth \$180,000 for three years. Recipients are paid to work on and complete their Ph.D. degree.

Whitmore is advised by Glenn Zhang. She is the second graduate student in four years to receive this award from his lab. Her research focuses on animal genetics.



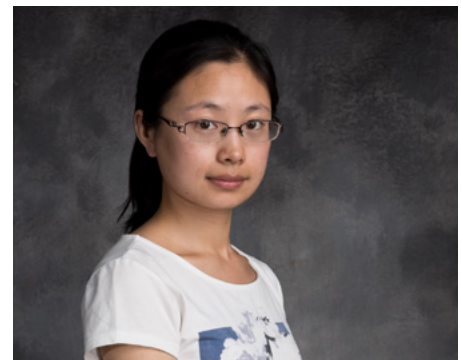
2021 Dr. Joe V. Whiteman Award

The 2021 Dr. Joe V. Whiteman Award winners have been announced! Excel Maylem, Mohammad Habibi and Qing Yang, animal science Ph.D. students, were awarded first, second and third place, respectively, for their oral research presentations.

Excel Maylem is pursuing her Ph.D. in animal science with a focus in physiology. She is advised by Leon Spicer.

Mohammad Habibi is pursuing his Ph.D. in animal science with a focus in nutrition. He is advised by Adel Pezeshki. Habibi also received the 2021 Joseph P. Fontenot Travel Scholarship Award.

Qing Yang is pursuing her Ph.D. in animal science with a focus in genetics. She is advised by Glenn Zhang.



Pictured (From left): Excel Maylem, Mohammad Habibi and Qing Yang.

NACTA Graduate Student Teaching Award

Brittany Lippy and Jazmin Markey, graduate students in the OSU Department of Animal and Food Sciences, were both honored with NACTA Graduate Student Teaching Awards for 2021! The award recognizes graduate students who excel as teachers in the agricultural disciplines and who are involved in teaching colleges courses. NACTA reviews a specific list of criteria for each applicant, including the graduate student's teaching philosophy.

Both Lippy and Markey are pursuing their M.S. in animal science with a focus in nutrition at Oklahoma State University. Lippy is mentored by Blake Wilson and Markey is mentored by Dan Stein.

To qualify for this award, a graduate student must have been involved in teaching a college course for at least one year and have a current graduate student membership in NACTA. There will be a slideshow to honor the award winners during the virtual NACTA conference. Certificates for the award and hard copies of the NACTA Awards program were mailed to the recipients.



Pictured (From left): Brittany Lippy and Jazmin Markey.

Women's Faculty Council Student Research Award

Parniyan Goodarzi, an animal science graduate student, has received the 2021 Women's Faculty Council Student Research Award. As part of the award, Goodarzi will receive \$750 for education expenses.

The award recognizes women for quality and strength in their research activities. Award winners will be featured by the Women's Faculty Council on their website and social media platforms.

Goodarzi also received the 2021 H. Allen Tucker Graduate Student Travel Scholarship at the ASAS-CSAS-SSASAS Annual Meeting.

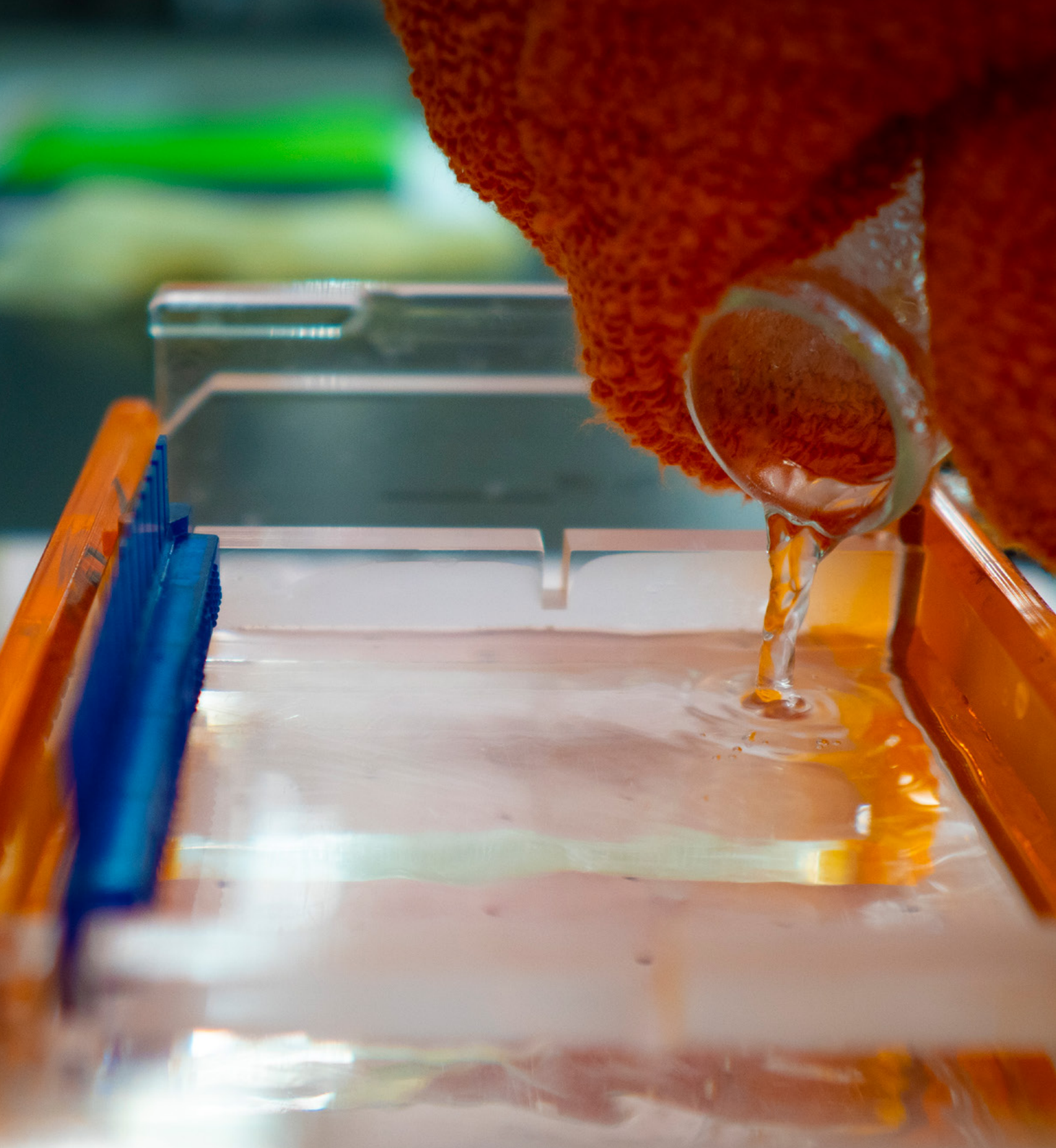
Goodarzi is mentored by Adel Pezeshki and is pursuing a Ph.D. in animal science at Oklahoma State University. Her focus is in animal nutrition.



Thank You!

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