

SOUTH DAKOTA

A MAGAZINE BY SOUTH DAKOTA STATE UNIVERSITY | WINTER 2024 **COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENTAL SCIENCES**



FROM THE DEAN:



Welcome to the Winter 2024 edition of Growing South Dakota. We had a successful fall semester. Our faculty, staff and students were recognized for several awards. Dr. Michael Gonda received the USDA award for Excellence in College and University Teaching. This is the highest teaching award offered by USDA. When considering USDA regional and national awards, the SDSU College of Agriculture, Food and Environmental Sciences has had a faculty member recognized for excellence in teaching in four of the past five years. Those faculty represented three of the six departments in CAFES. Our students benefit from being in the classroom with faculty who are among the most impactful in the United States, and we have the awards to back that statement up. CAFES also has outstanding student athletes excelling

both academically and athletically. Clay Carlson earned a bachelor's degree in Animal Science and is now pursuing his master's degree and continuing his wrestling career. Clay is a two-time All American, four-time Academic All American, and two-time Big 12 Conference Wrestling Scholar-Athlete of the Year. Tanner Sloan was the 2023 NCAA runner-up at 197 lbs. and is a two-time member of the Academic All-Big 12 Wrestling First Team. Carson Noecker, a first-year student in Ag Science, won the Summit League Cross Country Men's individual title and led the Jackrabbits to the men's team championship. We have national leaders like Carter Howell, an Agricultural Business Major, CAFES Prexy Council officer and Admissions Ambassador, who was one of only six individuals in the United States elected to serve as a National FFA Officer.

I am pleased to report that all our administrative positions have been filled in CAFES. As many of you know, we are in a challenging labor environment and academia is no exception. Dr. John Blanton joined SDSU on October 22 as the Associate Dean of Research and Director of the South Dakota Agricultural Experiment Station. Dr. Amanda Blair was recently promoted to Assistant Director of West River Operations. Dr. Blanton's and Dr. Blair's leadership will best position CAFES to contribute to SDSU's new strategic plan, "Pathway to Premier."

None of these accomplishments would be possible without the support of our alumni and friends. I am pleased to share that the 2023 "One Day for State" was a record day for CAFES due to the generous support of our alumni and friends. Thank you!

South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences

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GROWING

SOUTH DAKOTA

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College of Agriculture, Food and Environmental Sciences student Carter Howell is the National FFA Southern Region Vice President.

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Continuing a Leadership Journey CAFES Student Named National FFA Officer

Tessa Erdmann



hocked, surprised, elated, nervous, and overjoyed are just a few of the emotions South Dakota State University student Carter Howell felt as his name was called at the 96th National FFA Convention after being elected to serve as the 2023 to 2024 National FFA Southern Region Vice President.

Growing up around agriculture, specifically strawberry production, Howell enjoyed the sense of community that came with being a part of the agricultural industry.

Howell, from Lithia, Florida, initially joined FFA because it was an elective course that interested him. He says he had no intention of becoming an active member of the organization. However, after placing third in his first Career Development Event (CDE), he slowly began to love the organization and became more active within it.

"I was overjoyed because someone saw me and believed in my abilities," said Howell. "This small event led me to continue to pursue FFA through middle and high school."

He started to challenge himself, thanks to support from mentors such as his FFA advisor, Timothy Cribbs. After nearly ten years within the organization, he competed in virtually every competitive event possible, within both CDEs and Leadership Development Events (LDEs). These contests ranged from extemporaneous public speaking and parliamentary procedure to forestry and food science. Each event allowed him to learn more about agriculture and grow various personal skills he has carried throughout his life.

After years in the organization, he reflected on the people who had impacted his life. He recognized that many of those individuals had served as state FFA officers, which led him to run for a position on the 2021 to 2022 Florida State FFA Officer team. He was elected to serve as the Secretary.

"I had a desire to emulate what those I admired had done, motivating students, meeting students where they are at, and being a person that others can rely on," said Howell.

In the summer of 2020, he had the opportunity to live in White, South Dakota, with his FFA advisor's family. While staying with Joshua and Abbie Cribbs, he said he fell in love with South Dakota and SDSU. He was impressed by the school's programs and loved the campus' size and the ability to develop one-on-one relationships with peers and professors.

"Being from Florida, I wanted to experience agriculture and the world in a different setting," said Howell. "I had a connection to the area with Josh Cribbs because he is both a former SDSU Livestock Judging Coach and Animal Science Department faculty member, and Abbie Cribbs, an SDSU graduate."

After his year of serving as a Florida state FFA officer, he moved from his hometown to South Dakota in the fall semester of 2022, to attend SDSU, majoring in agricultural business and business economics.

"If I can change the life of just one person, I will have succeeded at what I set out to do," said Howell.

Howell is currently a junior and showed a desire to continue his leadership journey through SDSU's College of Agriculture, Food and Environmental Sciences by serving as a Students' Association Senator-At-Large, CAFES Prexy Council Ag Day Chair, Investment Club Event Coordinator, Admissions Ambassador, and CAFES Ambassador.

In the Spring of 2023, Howell decided that his leadership journey was not over yet, because there was still more that he wanted to give back to the National FFA organization.

"The decision to pursue national office was not an easy decision; however, for me, it came down to two factors," said Howell. "First, I wanted to communicate that FFA is for everyone because agriculture is for everyone. Secondly, my greatest mentor, my late FFA advisor, Mr. Cribbs, had a conversation with me before he passed away and stressed to me that if I still felt like I had more to offer the organization, then I was called to serve. That thought stuck with me and was critical in making my decision."

After being selected as a National FFA officer, Howell's life will look different than before. On Dec. 4, Howell started his journey as a National FFA Officer by beginning a two-month training process that will develop his skills leading workshops, giving keynote presentations, and much more.

After the training months, he will spend nearly 300 days in 2024 traveling all over the country, meeting with FFA members and conducting partnership visits with corporate sponsors, speaking about the value of FFA and the partnerships that support the future of the agricultural industry.

"I am extremely blessed and honored to be in the position that I am today," said Howell. "I know that I would not be in this position without all of the people that have poured into me over the years such as my teachers, professors, advisors, friends, family and so many others. Our support systems are what allow us to reach for more, and I am lucky to have such an expansive support system not only back home but on campus at South

Dakota State University. I am excited to represent the organization, the people that have led me to this moment, and my college as I travel across the country this year as an ambassador of agriculture and FFA."

Through FFA, Howell has learned that everyone has a unique passion or something that makes them come alive. "As leaders, it is our job to help others find it," he said. Through his year as a National FFA officer, Howell hopes to help others find their unique passions.

He hopes to inspire individuals to believe in themselves the way he was inspired to believe in himself after his first CDE contest in seventh grade.

"If I can change the life of just one person, I will have succeeded at what I set out to do," said Howell.



Carter Howell with his National FFA officer jacket surrounded by other past or current FFA state officers that attend SDSU. Front row from left: Raesa Zelinsky, Mackenzie Kuschel; Miriana Eiden, Carter Howell, Kathryn Rausch, Hadley Stiefvater. Back Row from left: Mason Grams, Emily Robbins, Hunter Eide, John Petersen, Rachel Teunissen.

CAFES Leadership Team Grows

John Blanton Named CAFES Associate Dean for Research and South Dakota Agricultural Experiment Station Director

Addison DeHaven



John Blanton

John Blanton Jr. has been named the associate dean for research for the College of Agriculture, Food and Environmental Sciences and director of the South Dakota Agricultural Experiment Station.

"I am thrilled to be selected to join South Dakota State University," Blanton said.
"One of the key aspects that drew me to this position is South Dakota State University's focus on improving the lives and livelihood of the state's producers."

Previously, Blanton served as a professor and department head in Purdue University's Department of Animal Science. Prior to Purdue, Blanton was the interim associate

director of Mississippi's Forestry and Wildlife Research Center, as well as director for the state's Agricultural and Forestry Experiment Station.

"I am very excited to have Dr. Blanton joining our team," said Joseph Cassady, South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences at SDSU. "He brings a wealth of experience in administration, research, education and entrepreneurship. Dr. Blanton's

leadership will better enable the College of Agriculture, Food and Environmental Sciences to serve our land-grant mission."

Blanton holds bachelor's and master's degrees in animal science and population genetics from New Mexico State University, and a doctorate in muscle biology from Purdue.

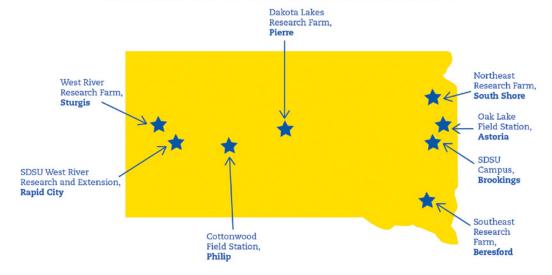
In addition to holding leadership positions in higher education for the past 15 years, Blanton has continued conducting research, primarily on animal growth and development. Over the course of his career, he has led research programs in eight different countries, received nearly \$26 million in external funding, published 50 refereed journal articles and 75 abstracts and obtained two patents.

"The college's dedication to agricultural research, innovation and outreach aligns perfectly with my passion for making meaningful agricultural impacts," Blanton added.

Blanton also brings a wealth of industry experience to SDSU, having worked for the Delaware companies KVS Service and Intervet Inc. (now Schering-Plough). He is also the co-founder of the Center for Excellence in Cryobiology.

He started his duties at SDSU on Oct. 24, replacing interim director Russ Daly.

Research Station Locations



CAFES Leadership Team Grows

Amanda Blair Promoted to Assistant Director of SDSU West River Research and Extension

The South Dakota State University College of Agriculture, Food and Environmental Sciences recently announced the promotion of Amanda Blair to assistant director of SDSU West River Research and Extension.

Blair is a professor in the Department of Animal Science at SDSU. Along with a primary research appointment, she served as the SDSU Extension meat science specialist. Blair co-leads a recently awarded \$80 million Partnerships for Climate Smart Commodities grant focused on beef and bison systems, a U.S. Department of Agriculture-Natural Resources Conservation Service program.

In her new administrative role, Blair will provide leadership to college research personnel located in Rapid City, including faculty, staff and students. She will also provide oversight to the SDSU Cottonwood Field Station located near Philip.

Kristi Cammack, assistant dean of West River operations for the college, said with the growing success the College of Agriculture, Food and Environmental Sciences is experiencing West River in South Dakota, greater administrative leadership and support is needed to ensure that level of success continues.

"Research and outreach activities have been booming in western South Dakota along with a growing number of faculty and students in the departments of Animal Science, Agronomy, Horticulture and Plant Science, and Natural Resource Management based in that location," Cammack said. "Amanda is a highly respected faculty member and has held leadership roles within the college and university. Having Amanda in a leadership role West River will help ensure we continue our trajectory of success."

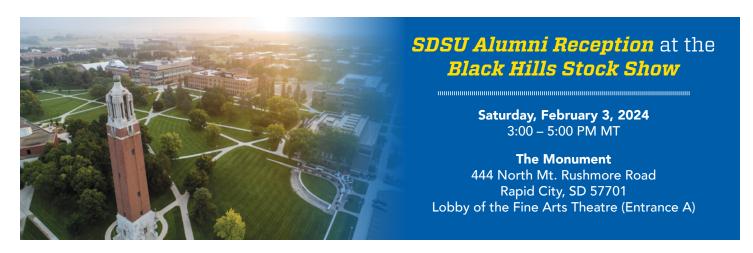
The Cottonwood Field Station serves as SDSU's primary livestock research facility in Western South Dakota. With recent investments by the South Dakota Legislature, the Cottonwood station is undergoing a major upgrade that includes new classroom, livestock handling and feedlot facilities. "Amanda comes from a production background and continues to be active in her family's ranching operation near Sturgis," Cammack said. "She is a member of the team working on the Cottonwood Field Station remodel project, and her practical experience and knowledge is key to ensuring the station operates optimally for both research and production."



Amanda Blair

Blair grew up on a small, diversified farm in southeastern Indiana and received her bachelor's degree and doctorate from Purdue University. Her doctoral research focused on understanding the interactions between muscle ultrastructure and postmortem proteolysis with the goal of improving beef tenderness. Since joining the faculty at SDSU, her research has expanded to focus on understanding the effects of pre- and post-natal management strategies on subsequent growth, body composition, environmental outcomes and meat quality of beef cattle and bison.

Blair assumed her new role on Aug. 22 and continues to be based at the West River Research and Extension facility in Rapid City.



Award-Winning Faculty & Staff

Dr. Michael Gonda Receives USDA Award

Tessa Erdmann

ichael Gonda, Department of Animal Science professor, was recently recognized by the United States Department of Agriculture National Institute for Food and Agriculture with the National Award for Excellence in College and University Teaching in Food and Agricultural Sciences for 2023.

"I nominated Dr. Gonda for the USDA Award for Excellence in Teaching because he has consistently been an outstanding instructor in our college," said Vikram Mistry, recently retired David A. Thompson Endowed Department Head, Associate Dean, and Professor Emeritus. "He has in-depth knowledge of the subject matter. His dedication to student learning and innovative and engaging teaching methods enable students to learn effectively. His impact on students from across the college is remarkable, and year after year, students consistently report him as one of the best instructors in the college. The College of Agriculture, Food and Environmental Sciences is honored to have Dr Gonda as a faculty member."

Gonda received his undergraduate degree in animal science at North Carolina State University. He then transferred to the University of Wisconsin-Madison to obtain his master's and doctorate in dairy science and started his career with South Dakota State University in 2008 as an assistant professor.

On campus, he enjoys teaching Livestock Breeding and Genetics, Survey of Animal Science, Veterinary Genetics and Genomics, Advanced Selection of Domestic Animals, and Beef Cattle Breeding.

Besides teaching, he devotes his time to his research focusing on animal genetics and genomics and some scholarship on teaching and learning. He also advises the Collegiate Farm Bureau and co-advises Alpha Zeta and the Gender and Sexualities Alliance, all clubs on the SDSU campus.

Through the USDA National Awards for Excellence in College and University Teaching in the Food and Agricultural Science Program, a selection committee of nationally recognized teachers and scholars chose two national recipients, two early career recipients, and two teaching and student engagement recipients.

The program was launched in 1922 and aims to recognize outstanding college faculty in agriculture, natural resources, veterinary, and human sciences. Nominees are evaluated based on their abilities as instructors, education innovation, service to students, professionalism, and scholarship.

"I am honored and humbled to receive this award," said Gonda. "Although these awards are given to individuals, I would not have received this award without the constant support of my colleagues, SDSU administration, and especially my students. I care very much about the students we teach at SDSU, so receiving this award is meaningful. Teaching is more than just showing up to class, delivering your lecture, and going back to the office. Some of the most impactful work in education happens outside of the classroom. The work I have done with students outside of the classroom, such as advising student organizations, leading education abroad classes, and supporting undergraduate research, have been some of the most rewarding experiences I have had as an educator at SDSU."

Gonda has led multiple study abroad programs to several different countries and most recently took a class to South Africa in the spring of 2023 to learn about agricultural practices, culture and history.

Gonda received his award at the Association of Public and Land-Grant Universities Meeting in Seattle, Washington, on Nov. 12, 2023.



Michael Gonda received his award at the Association of Public and Land-Grant Universities meeting.

Award-Winning Faculty & Staff

SDSU Extension program leader receives Society of Range Management Fellow Award

Candy DenOuden

hen Sandy Smart was growing up, his family would take road trips from his native Wisconsin to his dad's home state of California. He remembers driving through South Dakota on Interstate 90, and being awed once the landscape started to open, especially near the Missouri River divide.

Years later, at graduate school in Nebraska, Smart visited the Sandhills and "fell in love with the prairie" all over again.

"Now it's really cool I get to live and work in the state I remember making those drives through," said Smart, SDSU Extension Agriculture and Natural Resources Senior Program Leader.

That love of rangelands has shone through his entire career as a researcher, professor, SDSU Extension program leader, and volunteer with professional organizations like the Society for Range Management. In recognition of those efforts, the Society for Range Management recently named Smart a 2023 Fellow Award winner.

"For the tremendous contributions to the science and management of rangeland ecosystems he has made, it is with great honor the Society for Range Management recognized Dr. Smart with the 2023 Fellow Award," the society wrote in its announcement.

According to the Society for Range Management, the title of Fellow is conferred upon its members in recognition of exceptional service to the society and its programs. "This high honor is granted in the belief that special recognition should be given for exceptional and dedicated service to the Society," said the Society for Range Management.

Smart has been a member of the Society for Range Management for 26 years. In that time, he has served as South Dakota section president, chair of the program accreditation committee, chair of the nominating committee, and as an associate editor for the Rangeland Ecology & Management publication.

"Sandy can be counted on to do an exemplary job no matter the situation and do it with a smile and endless energy and enthusiasm," the Society for Range Management said.

He looks at his prolific contributions matter-of-factly: "You give back to your professional organization," he said.

Prior to leading the SDSU Extension Agriculture and Natural Resources program, Smart spent 20 years teaching and researching range management with SDSU and has an extensive background in rangeland ecology, grazing management, grassland fire, forage seedling and forage quality testing.

As a professor, Smart also coached teams to compete in university judging contests. University programs can be accredited through the Society for Range Management, and Smart led the effort to achieve accreditation for SDSU about 15 years ago. He then later served on the society's accreditation committee.

One of the things Smart most appreciates about the Society for Range Management is its emphasis on educating the next generation of rangeland conservationists. The society has programs for all ages: range camps teach elementary-aged children how to identify range plants and wildlife, rangeland days offers opportunities for youth aged 8 to 18 to study plants and habitat, and university judging contests give college students a change to hone their range management knowledge.

"We recognize young people are pretty important to our future, and we invest in youth," Smart said.

For more information, contact Sandy Smart, SDSU Extension Agriculture and Natural Resources Senior Program Leader, at 605-688-4940 or Alexander.Smart@sdstate.edu.



SDSU Extension Agriculture and Natural Resources Senior Program Leader Sandy Smart was named a 2023 Society for Range Management Fellow in February during the group's annual meeting in Boise, Idaho.

New Endowment Holders Recognized

Several College of Agriculture, Food and Environmental Sciences faculty members were recently recognized as South Dakota State University paid tribute to the university's newest endowment holders. An endowed position is both an honor to the named holder of the position, and a tribute to the donor who made the endowment possible.

Endowments offer their holders resources to invest in research, their college or their department, pay for graduate assistants or travel and buy laboratory equipment, for example.

The following CAFES leaders were recognized during the University Leadership Honors Ceremony on Sept. 21, 2023 in Founders Recital Hall in the Oscar Larson Performing Arts Center:

Kasiviswanathan Muthukumarappan, Maynard A. Klingbeil Endowed Department Head of Agricultural and Biosystems Engineering



Muthukumarappan received his bachelor's degree in mathematics from Madras University, India, a bachelor's degree in agricultural engineering from Tamil Nadu Agricultural University, India, and a master's degree in agricultural and food engineering from the Asian Institute of Technology, Thailand. After

earning his doctorate in agricultural engineering from the University of Wisconsin-Madison in 1993, Muthukumarappan then served as an associate researcher in the UW Department of Biological Systems Engineering until August 1997, when he joined the SDSU Department of Agricultural and Biosystems Engineering as an assistant professor.

Muthukumarappan has risen through the ranks. He has devoted his time to developing fundamental platform technologies and bio-refinery systems to produce energy, materials and chemicals from renewable resources. He has received a total of \$20 million in research support funding from the U.S. government, federal organizations and other agencies, and has authored or co-authored over 250 peer-reviewed publications, participated in over 350 scientific presentations to regional, national and international audiences and has contributed to the update of the American Society of Agricultural and Biological Engineers (ASABE) and Food and Process Engineering Institute standards.

He has served as Interim Department Head for the Department of Agricultural and Biosystems Engineering since June 2022 and was named Department Head in March 2023.

Nicholas Uilk, *Maynard A. Klingbeil Endowed Educator in Precision Agriculture*



An instructor in the Department of Agricultural and Biosystems Engineering, Nicholas Uilk has been on the faculty since 2009. He has taught a range of classes in multiple academic programs, including agricultural systems technology, agricultural education and precision agriculture, and he focuses on

providing students with hands-on experiences. Uilk has worked to meet industry demand in precision agriculture by creating a program that teaches students the value that precision practices can bring to production agriculture.

Throughout his years at SDSU, Uilk has been an integral force

in driving a 250% enrollment increase in the agricultural systems technology program since his start in 2009. Uilk's other notable achievements and awards include the 2013 Walt McCarty Academic Advising Award, 2015 Gamma Sigma Delta Outstanding Teacher Award, 2020 USDA Excellence in Teaching Award for teaching and student engagement, 2020 Precision Ag Awards of Excellence Educator/Researcher Award and the 2020 Association of Public and Land-Grant Universities National Teaching Award. Well respected among students, Uilk was also nominated for the College of Agriculture, Food and Environmental Sciences Prexy Council Teacher of the Year Award in 2015, 2017, 2018 and 2023.

Robert Thaler, Farm Credit Services of America Endowed Chair in Swine Production



Robert Thaler has served the South Dakota State University Department of Animal Science since 1988, spending the majority of his career as SDSU Extension Swine Specialist. He has provided additional leadership in roles such as Interim Department Head and SDSU Extension Agriculture and Natural

Resources Program Leader, but always returns to his passion for serving local, regional, national and international pig farmers through his Extension Swine Specialist role.

Thaler's leadership and national reputation helped secure \$7.4 million in funding from a diverse, multi-state group of swine industry leaders to build the SDSU Swine Education and Research Facility, which opened in 2016.

The list of Extension programs Dr. Thaler has led is long and covers nearly every pig industry topic. He can effectively conduct an on-site audit of a swine barn, visit with a registered dietitian about pork production, or present current research to the leading producers in the world.

Thaler was recently inducted as a 2023 American Society of Animal Science Fellow in the Extension category for his dedication and commitment to the swine industry. In 2003, he was honored with the National Pork Board's Innovation Award in Teaching and Extension, and in 2013 he was one of six recognized as a National Hog Farmer magazine Master of the Pork Industry. In 2018, he was awarded a Fullbright Scholarship to Vietnam National University of Agriculture.

Each year, he leads a group of up to 30 students on a trip to either Vietnam or China to help educate students on the global aspects of pork production and agriculture. In 2016, he received the SDSU Global Engagement in International Education/Student Engagement award.

Inaugural Precision Livestock Field School Offered at SDSU Cottonwood Field Station

Candy DenOuden

School from July 31 to Aug. 2, 2023, at the Cottonwood Field Station near Philip, South Dakota.

Thirteen people attended the three-day event, which brought people from as far away as Sardinia, Italy.

Speakers included Hector Menendez, assistant professor and SDSU Extension Livestock Grazing Specialist; Jameson Brennan, assistant professor and SDSU Extension Livestock Grazing Specialist; Krista Ehlert, assistant professor and SDSU Extension Range Specialist; Xufei Yang, assistant professor and SDSU Extension Environmental Quality Engineer; Young Chang, SDSU assistant professor and precision agriculture automation engineer; SDSU Extension Precision Livestock Field Specialist Logan Vandermark; and Ben Turner, Texas A&M Kingsville, along with industry professional Meredith Harrison.

Vandermark said the program focused on educating participants, primarily graduate students, on implementing precision technologies and analyzing data for meaningful results.

"We wanted to take the initiative to train the next generation of students and researchers," Vandermark said. "This training is critical to fully realize the potential benefits of these technologies with students who know both practical livestock production and cutting-edge tools."

The Cottonwood Field Station is part of the South Dakota Agricultural Experiment Station at SDSU. As part of the station's research focus, scientists and SDSU Extension team members strive to learn more about the practical applications that precision ranching technology could provide for South Dakota farmers and ranchers. Events such as the Precision Livestock Field School are offered to share information about how equipment and data management could be utilized.

The first day of the Precision Livestock Field School started with a tour of the Cottonwood station, followed by presentations from experts in precision livestock technologies and hands-on experiences.

Precision ranching technologies have the potential to provide data to help producers make decisions that may impact profit margins, ranch sustainability and natural resource management.

Students were trained in the technologies currently implemented at the Cottonwood Field Station, including virtual fencing, precision feeding and weighing systems, and precision watering systems.

"Some students have already been to research conferences where these technologies are being discussed, but they've never actually seen it in person," Vandermark said. "They enjoyed the opportunity to get their hands on the equipment."

In addition to handling the equipment, Vandermark said it is important to learn how to use the data provided, and how to present it to producers. The second day of the field school trained students how to set up research trials with precision technologies. On the final day, students learned how to analyze the data to help researchers and producers make data-driven decisions.

"There is a gap in education to understand the data science and animal science of this kind of research. Managing all that data and looking at it seems a little overwhelming," Vandermark said. "We're able to provide meaningful graphs, tables and summary statistics that clearly tells a story of how the cattle are performing and behaving on extensive rangeland systems."

Event organizers plan to hold the field school annually, and to add other programs throughout the year. Vandermark said an anticipated 2024 field school for producers will focus on hands-on applications and the economic breakdown of precision technologies.

"With the growing interest and use in precision livestock technologies, schools like this will help South Dakota livestock production to remain competitive by reducing costs while maintaining the heart of our ranching culture and tradition," Vandermark said.

For more information, contact Logan Vandermark, SDSU Extension Precision Livestock Field Specialist, at 605-394-2236 or Logan.Vandermark@sdstate.edu.



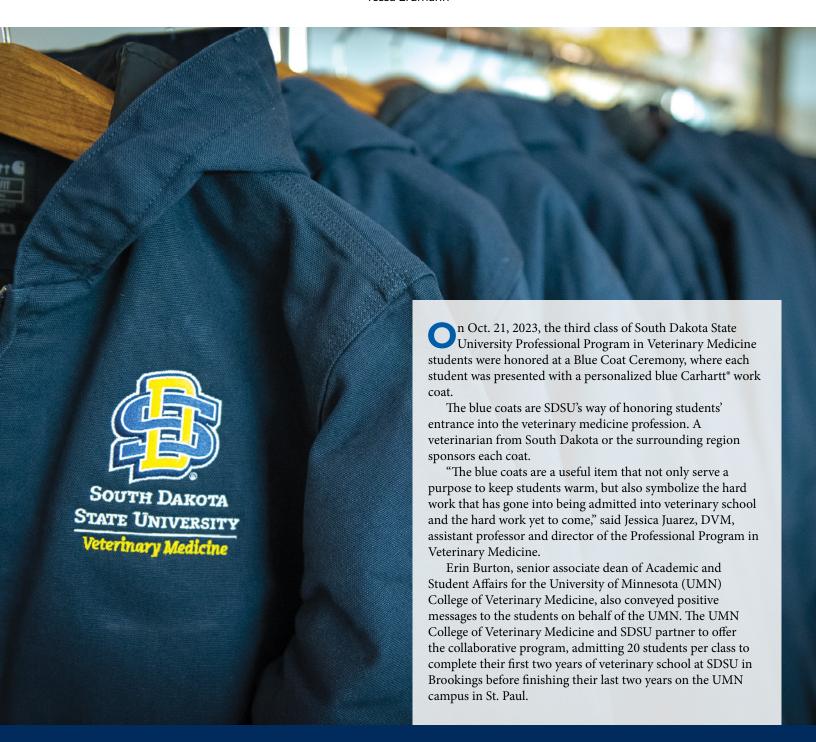


Participants of the 2023 Precision Livestock Field School at the SDSU Cottonwood Field Station.



SDSU Celebrates Professional Program in Veterinary Medicine Students

Tessa Erdmann





Professional Program of Veterinary Medicine students were honored at a recent Blue Coat Ceremony

Veterinary students celebrated and presented with a blue coat at the ceremony include:

- Rachel Blue of Henry, South Dakota sponsored by Dr. William Howard of Howard Veterinary Clinic in Watertown, South Dakota
- Moriah Bullerman of Adrian, Minnesota sponsored by Dr. Gary Bosch of Medgene in Brookings, South Dakota
- Megan Eickhoff of Hiawatha, Kansas sponsored by Dr. David H. Zemen of Brookings, South Dakota
- Kaden Eisenbraun of Box Elder, South Dakota sponsored by Dr. Heather Lerseth-Fliehs of Groton Veterinary Clinic in Groton, South Dakota
- Levi Erdman of Appleton, Wisconsin sponsored by Dr. Jennifer Fischer of Valley City Veterinary Hospital in Valley City, North Dakota
- Morgan Fosdick of Petersberg, Illinois sponsored by Dr. Jennifer Stevens of Horizon Pet Care in Brandon, South Dakota
- Parker Freiberg of New Brighton, Minnesota sponsored by Dr. Alice Harty of Milesville, South Dakota
- Aidan Friesen of Olivet, South Dakota sponsored by Dr. Dave Barz of Northwest Veterinary Supply
- Joanna Hansen of Racine, Minnesota sponsored by Dr. Jane Christiopher-Hennings of Arlington, South Dakota
- Olyvia Horsman of Rochester, Minnesota sponsored by Northern Plains Animal Health of Aberdeen, South Dakota
- Cassandra Kadrlik of Montgomery, Minnesota sponsored by Dr. Mark Appelhof of Clear Lake Veterinary Clinic PC in Clear Lake, South Dakota
- MaKenna Kalosis of Onalaska, Wisconsin sponsored by Dr. Corale Dorn of Dells Veterinary Services in Dell Rapids, South Dakota
- Mauren Lewis of Sioux City, Iowa sponsored by Veterinarians of the SDSU Pre-Vet Class of 2018
- Mary Novak of Carson City, Nevada sponsored by Dr. Kay Miller of Fulton, South Dakota

- Katie Orth of Little Falls, Minnesota sponsored by Dr. Corale Dorn of Dells Veterinary Services in Dell Rapids, South Dakota
- Kasey Savoy of Rapid City, South Dakota sponsored by Dr. George Twitero of Black Hills Animal Hospital in Rapid City, South Dakota
- Dalton Vis of Sioux Falls, South Dakota sponsored by Dr. Eliese Reinalda of Beresford Vet Clinic in Beresford, South Dakota
- Amanda Wiek of Huron, South Dakota sponsored by Dr. Gina Neu of Prairie View Vet Clinic in Highmore, South Dakota
- Mason Yunk of Poplar Grove, Illinois sponsored by Oahe Veterinary Clinic of Oahe, South Dakota
- Sarah Zielinski of Plymouth, Minnesota sponsored by Dr. Grant Weaver of Aurora Pharmaceuticals Inc. in Northfield, Minnesota

"It is incredible to see the strong support for the Professional Program in Veterinary Medicine from South Dakota veterinarians. Each student's coat was individually sponsored by a veterinarian who practices in the state, and words of encouragement were provided by veterinarians for the students," said Juarez. "The Blue Coat Ceremony is a proud tradition for our program where the blue Carhartt coat symbolizes students' entrance into the SDSU PPVM and is unique to our program. The Professional Program in Veterinary Medicine allows students to gain hands-on practical experience working with food and companion animals during their time at SDSU while preparing to serve in critical roles across the spectrum of animal health, environmental health, and public health."

To learn more about the Professional Program in Veterinary Medicine, contact Juarez at <u>jessica.juarez@sdstate.edu</u>.

SDSU Meat Science Graduate Student Approaches School and Life with Winning Mindset

Ella Stiefvater

Clay Carlson's friends, family members and coaches sum up his approach to life in one word: consistency.

Carlson agrees, attributing his successful wrestling career and academic accomplishments at South Dakota State University with a persistent work ethic and strong support system.

"It's really hard to accomplish anything unless you're consistent in the way you do it and how often you do it," he said. "If you're going to go to wrestling practice and only work hard one day, you're not going to get very far. But if you're consistent about working hard, then you're going to start seeing results."

His support system includes his family and fellow wrestlers – especially a cousin and his older brother – and wife of almost two years, Olivia, whom he met in tenth grade.

"She has just helped me in so many ways. She keeps me grounded, centered, and focused on the things that are important. I know I wouldn't be where I'm at today if it wasn't for her," Carlson said

The two-time All-American wrestler and SDSU meat science graduate student traces his work ethic and motivation to his early roots on the family dairy farm near Pennock, Minn., where he spent a large portion of his time in the milking parlor and field.

Initially planning to become a veterinarian, Carlson spent his first four years at SDSU getting a bachelor's degree in animal science and meeting the requirements for veterinary school. Now on a different path as a graduate student in meat science, Carlson still credits the impact growing up on the farm had on his future.

From the dairy to the wrestling mat

Carlson's passion for wrestling started with his first wrestling tournament at age 3. He continued through high school in Willmar, Minn., and finished second in his weight class at the state tournament during his junior season. The following year he claimed the state title the same day his cousin, Cael, also won a different weight class.

"That was definitely one of my proudest moments," he said of the shared victory.

With state successes under his belt, Carlson started receiving offers from several universities to join their wrestling programs.

SDSU wrestling coach Damion Hahn sought Carlson out within his first week-

Clay Carlson
earned a B.S.
in Animal
Science
and is now
pursuing
his M.S.
degree and
continuing
his wrestling
career.

Clay is a
two-time All
American,
four-time
Academic All
American,
and twotime Big 12
Conference
Wrestling
ScholarAthlete of
the Year.



CLAY CARLSON

and-a-half of being hired and talked to Carlson's family for nearly three hours about the SDSU wrestling program. The time Hahn invested in meeting his recruit's family while still settling into a new position was a strong factor in Carlson's final decision to wrestle at SDSU.

"I really liked the way he approached life," Carlson said. "He talked about building men, not just wrestlers, which was really important to me."

Carlson also dreamed of wrestling with his older brother, Colten, who competed at SDSU. After meeting with Hahn, Carlson committed to SDSU and made that dream a reality.

"[SDSU] has a really great animal science program, and in terms of getting a good education I knew this was the place to go," Carlson said. "Those things paired with getting to wrestle with my brother and a coaching staff I liked made it a perfect fit for me."

In his true freshman season, Carlson's record was 29-5 in open tournaments. The following season he started for SDSU but finished sixth at the Big 12 competition, one place away from qualifying for nationals.

"That hurt pretty bad," he said. "I just remember I spent the whole next summer training and focusing."

The next year he started again for SDSU, finishing fourth at the Big 12 competition and qualifying for nationals for the first time at the collegiate level. Ranked a distant 20th coming into the tournament, Carlson surprised even his coach by soaring all the way to the "blood round," a wrestling term for the intense final rounds of the sport. The winner would become All-American while the loser would be out of the bracket.

In his nearly 20-minute match with a top-ranked competitor, Carlson won in the last 10 seconds. He then made university history as his coach's first All-American wrestler and claimed eighth place at the national event. He returned the following season and became the first Jackrabbit to take first place at the Cliff-Keen Las Vegas Invitational.

For the most recent season, Carlson finished third at the Big 12 tournament and went to nationals. He had another dramatic final-round finish, winning with only three seconds left in the match. Once again, he became an All-American with a 6-2 finish and earned fifth place overall.

After receiving another year of wrestling eligibility because of COVID, Carlson and Olivia had a big decision. With the possibility of attending veterinary school while finishing his final wrestling season, Carlson decided to pursue a new opportunity at SDSU.

Kyle Grubbs, assistant professor of meat science, offered Carlson the chance to perform a graduate research project under his mentorship. Carlson accepted.

Carlson's research is focused on proteolysis, which is the process of proteins breaking down in the muscle after an animal is harvested that contributes to the final tenderness of the product. With the rise of carcass weights in the livestock industry over the past 30 years, Carlson's year-and-a-half long project looks at how carcass size affects the ultimate tenderness of four meat cuts including the ribeye, New York strip, Denver cut, and eye of the round.

"Clay's research has the potential to influence the beef industry's carcass chilling and handling practices which can ultimately benefit consumers by producing more tender cuts of beef," Grubbs said.

After his final wrestling season and graduate work are done, Carlson is considering work in the meat processing industry; he's also interested in coaching. Whatever path he takes, Carlson plans to keep applying that trademark consistency.

"I try to approach all aspects of my life in the same manner," he said. "If I'm going to do something, I might as well be as good at it as I possibly can or otherwise it's kind of a waste of my time."



SDSU Alumni has been selected as the Head Coach of the South Dakota State University Livestock Judging Team

Tessa Erdmann

Tommy Norman has been selected as an instructor and head coach of the South Dakota State University Livestock Judging Team. Norman recently graduated from SDSU with a master's degree in ruminant nutrition. He also attended SDSU for his bachelor's degree in animal science.

While obtaining his bachelor's degree, Norman had the opportunity to join the judging team himself. Although Norman did not have much livestock judging experience before college, he was encouraged by Brady Jensen, SDSU head livestock judging coach from 2017 through 2022, to give the opportunity a try.

After graduation, he took the next step to obtain his master's degree and become the assistant coach of the livestock judging team alongside Jensen from May 2021 to December 2022. Norman became the interim instructor and livestock judging coach in January 2023 when Jensen left SDSU to return to the family farm.

"I had the privilege to learn from and coach alongside Brady, one of the industry's greatest coaches and mentors, who inspired the professionalism, drive for excellence, and gratitude for a university that supports what it takes to be nationally competitive," said Norman.

Norman's primary focus within this position is to educate students in and out of the classroom to ensure success upon

completing their degrees. His goal is to integrate a successful system to leverage the livestock judging program to raise the profile and promote the Department of Animal Science.

"I am very excited to have the opportunity to educate new and current students and travel with a team I am incredibly proud of," said Norman. "I applied for this position because I was confident that my interpersonal skills, mentoring ability, and livestock-judging intelligence would make a great addition to the Department of Animal Science here at SDSU. Most importantly, I love what I do and the people this position surrounds me with."

"Tommy Norman is a great addition to the Animal Science Department," said John Jaeger, head of the Department of Animal Science. "Having completed his bachelor's and master's degrees at SDSU, he is familiar with our university and already has valuable connections with the animal industry sector in the state and region. Tommy's livestock judging coach position is an important part of our department by providing undergraduate students with life skills and opportunities to make connections with livestock producers from not only South Dakota, but also across the country. The livestock judging team also serves to promote our department as one of the leading animal science departments in our region."

Kohler-Gee Endowment Supports Livestock Judging Success

s the SDSU Livestock Judging Team travels across the country attending judging contests, it takes a lot of financial support to make it possible for team members to make it to each event.

One supporting factor is the Kohler-Gee Endowment. This endowment was created to solidify the financial support for the SDSU Livestock Judging Team for years to come, by giving each team \$40,000 per year to use on livestock judging team needs. The Kohler-Gee Endowment provides funds to support youth livestock judging camps and programs.

The endowment was initiated by two former livestock judging coaches, Dan Gee and the late Paul "Buck" Kohler. Kohler joined the Animal Science faculty at SDSU in 1950 and successfully coached the SDSU Livestock Judging Team for 17 years. His 1962 team won the national contest at the International Livestock Show in Chicago. During his time at SDSU, Kohler gained national prominence as a horse specialist and judge. He retired from SDSU in 1985. Gee also coached the SDSU Livestock Judging Team for 17 years, having joined the faculty in 1967 as an instructor and

livestock judging team coach. He implemented new and innovative practices in animal evaluation and marketing in his classes and coordinated numerous livestock producer-related activities for SDSU such as the Beef Bowl, Pork Classic and Lamb Bonanza. Gee retired from teaching in 2000. Both Kohler and Gee were passionate about the SDSU Livestock Judging Team and keeping the legacy alive. Their efforts and enthusiasm got the ball rolling for what was to become a \$1 million endowment to support future judging success.

"Without the endowment we wouldn't be able to have the level of coaching and resources we are experiencing," said Mark Sandager, Development Director for the College of Agriculture, Food and Environmental Sciences. "The future of livestock judging is strong, because of the Kohler-Gee Endowment."

The SDSU Livestock Judging team legacy was celebrated at a Sept. 8, 2023 Livestock Judging Team reunion held at McCrory Gardens in Brookings.

South Dakota State University Animal Science Department Livestock Education & Research Facilities

Ella Stiefvater

Students in the South Dakota State University College of Agriculture, Food and Environmental Sciences can take advantage of important hands-on educational opportunities and learn practical real-world applications at multiple Department of Animal Science livestock units. Located in close proximity to the SDSU campus in Brookings, the following facilities provide out-of-the classroom learning experiences, support undergraduate and graduate research activities, and host SDSU Extension stakeholder outreach and education efforts.

Swine Education and Research Facility

Onsite Manager: Aaron Prinz

Assistant Manager: Jessica Lira da Silva

Faculty Supervisor: Jeffrey Clapper

Student Employees: 6 undergraduate

Offsite Manager: Juan Castilla Zuniga

Offsite Faculty Supervisor: Ryan Samuel

Offsite Student Employees: 2 undergraduate student

employees

About the Facility: Started in 2016, the primary purpose of South Dakota State University's Swine Education and Research Facility is to provide students the opportunity to learn about swine production and provide a facility to support relevant swine industry research. At its beginning, the unit was made possible by the leadership of the South Dakota Pork Producers Council who actively participated in raising the funds for the \$7.4 million dollar project. Distinguished Professor, SDSU Extension Swine Specialist and Farm Credit Services of America Endowed Chair in Swine Production Bob Thaler says that the SDSU Swine Education and Research Facility was built on a vision from President Barry Dunn, former South Dakota Corn Endowed Dean of the College of Agriculture and Biological Sciences at the time to, "demystify swine production." Today, the Swine Education and Research Facility fulfills that mission by bringing over 500 students per year directly inside a fully operational farrow-to-finish barn with 150 sows to see each step of the

swine production process. Classes include Introduction to Animal Science, Swine Production, Livestock Reproduction, and even Agricultural and Biosystems Engineering courses. A series of glass viewing windows line the main hallway in the Swine Education and Research Facility, allowing visitors to observe all phases of the swine production process. In addition to the main Swine Education and Research Facility, students learn at an off-site wean-to-finish barn which focuses on production-based research of 1,200 pigs from the time they are weaned until harvest. Besides contributing to student employment and wide-spread swine education, the facilities fulfill the foundational purpose as a research opportunity for undergraduate and graduate students, in addition to supporting swine industry research projects. These projects focus on a variety of topics including nutrition, reproduction, waste management, and a host of other subjects that have a relevant impact on practices in the swine industry today.



Cow-Calf Education and Research Facility

Manager: Kevin Vander Wal

Assistant Manager: Andrea Brander, undergraduate

research assistant

Faculty Supervisor: Cody Wright

Student Employees: 8 undergraduate students and 2

graduate students

About the Facility: Research and education are at the heart of the SDSU Cow-Calf Education and Research Facility. From bringing students directly to the pasture for classes to getting them involved in the care and production of beef cattle, the Cow-Calf Education and Research Facility greatly prioritizes taking learning a step further. With hands-on opportunities to work directly with cattle for a variety of graduate and undergraduate research projects, the unit supports projects that study multiple facets of beef production. Past research projects have included reproductive studies, feeding behavior, effects of weather on bull performance, and a variety of other topics that are directly communicated back to beef industry stakeholders. Currently, nearly 10 research projects are scheduled to take place at the unit leading up to May 2025. These projects are one of several student engagement opportunities the unit offers in addition to providing cattle for students to show in the Little International event each year. Students taking the Beef Seedstock Merchandising

class gain hands-on experience assisting with the annual SDSU Bull Sale, taking place on April 12, 2024. Students at SDSU have the chance to get involved with real-world beef cattle production with the benefit of precision technology through Performance Beef, an app used at the unit that tracks the feed, weight, and performance of cattle in one concise platform to maximize efficiency and synchronize data collection. Additionally, current projects taking place at the unit are using a front-loading freestanding scale to proportionally predict whole body weight and solar-powered equipment to measure gas emissions.



Ruminant Nutrition Center

Manager: Paul Schlobohm

Faculty Supervisor: Zachary Smith

Student Employees: 10 undergraduate and 8 graduate

student employees

About the Facility: The SDSU Ruminant Nutrition Center serves as the SDSU research feedlot. The unit is home to nearly 600 head of cattle dedicated to teaching both undergraduate and graduate students about the complex digestive processes of ruminant animals. Any opportunity to take students into the real world for education is critical and the 50-pen research facility is a go-to for faculty to teach students about nutrition, health, and feedlot management. Students taking classes like feedlot operations and management have the opportunity to learn right at the unit and get an up-close look at what they are studying. But students aren't the only ones benefiting from the unit as the research that takes place in the feedlot is constantly focused on beef feeding topics that are applicable across the industry.

With a feed manufacturing facility, research feedlot pens, a hospital facility and cattle processing facility replicating industry standards, the unit can facilitate multi-faceted research that offers a direct look at the process from start to finish.



Sheep Research and Teaching Unit

Manager: Blake Johnson

Faculty Supervisor: Rosie Nold

Student Employees: 5 undergraduate students

About the Facility: The Sheep Research and Teaching Unit makes it possible to conduct nutrition and reproductive technologies research while also educating students about all aspects of sheep production. With the use of a Polypay and Hampshire flock, students are able to experience each part of the sheep life cycle from conducting ultrasound examinations on ewes to check for pregnancy, lambing, weaning, through animal maturity. Four to five student employees care for and provide for the needs of the sheep at the unit and take an active role in the development of lambs to be sold at harvest. Animal Science Assistant Department Head and Professor Rosie Nold serves as the faculty supervisor of the sheep unit. Facility Manager Blake Johnson oversees the daily operations of the facility and works with students to gain real-world sheep industry experience. Classes that utilize the Sheep Research and Teaching Unit throughout the year include Introduction to

Animal Science, Sheep Production, and Livestock Evaluation and Marketing classes, in addition to the SDSU Livestock Judging Team and pre-veterinary students who learn about basic sheep handling and procedures. Some of the ewes are also paired with students who will exhibit them in novice or experienced shows at Little International during the spring.



Beef Breeding Unit

Manager: Jessica Nora Drum

Assistant Manager: Kendal Green

Faculty Supervisor: Jessica Nora Drum

Student Employees: 6 undergraduate and 3 graduate

student employees

About the Facility: The Beef Breeding Unit is currently used for continuing research about the reproduction of beef animals with the help of 60 Black Angus and Hereford cross cattle. While historically it was used to prepare cattle to be bred and sent to the Cow-Calf Education and Research Facility, it has now developed into an independent station focusing solely on cattle reproduction and development of embryos. It also acts as a stop for purchased animals to quarantine as an added biosecurity measure before being sent to the larger herd. The unit has several trials that have recently taken place or are just starting, including studies about the long-term effects of heat synchronization on the estrous cycle of cattle, the superovulation of cattle with different diets, and continuing studies about embryo quality and conception rates. Students are able to take advantage of this unit in several ways including student employee positions, artificial insemination schools, and undergraduate and graduate research. Assistant Professor and SDSU Extension Reproductive Physiology

Specialist Jessica Nora Drum, unit faculty member, has plans to continue to provide student research opportunities and will look toward expanding the capabilities of the unit to meet the growing need for livestock reproductive education.



Equine Teaching Facility

Manager: Jennifer Forney-Eide

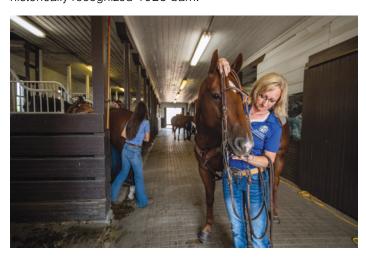
Faculty Involvement: Rosie Nold, Faculty Supervisor and

Carmen Paulson, Lecturer

Student Employees: 8 undergraduate employees

About the Facility: The SDSU Equine Teaching Facility is unique in its purpose as it serves solely for education and outreach to the community. In the spring ten foals are born and play a key role in the Horse Production class. When they are a little older and weaned in the fall, they become a primary part of the Introduction to Horse Management course. As they grow into yearlings, these same horses can be found in the Equine Training class and after this they will be professionally trained to for use in outreach events and programs. Students serve as student employees at the facility, undergraduate teaching assistants, and participate in the SDSU Horse Club. They also enjoy exhibiting the horses in the Little International event on campus in both novice and experienced divisions. Opportunities for the community to engage with the Equine Teaching Facility include the 'Horses for Heroes' program which helps military service men and

women; parent and children's riding courses facilitated by the Brookings Parks and Recreation Department; elementary school tours; grooming days; scavenger hunt events; and the annual South Dakota State FFA Horse Judging competition. Visitors and students alike can utilize the outdoor arena and a smaller indoor arena space and take in the beauty of the historically-recognized 1925 barn.



Facility Managers



Aaron Prinz Swine Education and Research Facility



Juan Castilla Zuniga Swine Education and Research Facility (Offsite)



Kevin Vander WalCow-Calf Education and
Research Facility



Paul SchlobohmRuminant Nutrition
Center



Blake Johnson Sheep Research and Teaching Unit



Jessica Nora Drum *Beef Breeding Unit*



Jennifer Forney-Eide *Equine Teaching Facility*

SDSU to spearhead NSF-backed fertilizer development project

Addison DeHaven

The National Science Foundation has tapped SDSU to serve as the lead institution for a new collaborative research partnership with the Center for Climate-Conscious Agricultural Technologies on microbial fertilizers.

Researchers from SDSU will use a four-year, \$4 million grant to work with colleagues from North Dakota State University, the South Dakota School of Mines and Technology, and Sitting Bull College to research microbial fertilizers as an alternative to expensive and environmentally harmful synthetic fertilizers. The study will also address the challenges of crop nutrient management in both North and South Dakota.

"We will focus on how using soil can play a critical role in reducing the effects of climate change and supporting ecosystems," said Srinivas Janaswamy, associate professor in SDSU's Department of Dairy and Food Science and the primary investigator for the grant.

"Climate-friendly and sustainable crop nutrition solutions are required to boost rural farms' economic and environmental stewardship."

Researchers will source the needed materials from the roots of corn and other widely farmed crops in South Dakota. They will also collaborate with farmers from rural communities and crop producers on Native American reservations to understand their needs and preferences.

Novel technology will used to isolate the microbes that will ultimately serve as the fertilizer. Beads, from locally sourced biopolymers, will encapsulate the microbial fertilizer to give it a "metabolic and competitive advantage" when added to the soil.

Work from the center will aid in K-12, undergraduate- and graduate-level education in South Dakota, while also providing training for careers in industry, research centers, government

agencies and academia. It will also establish an education-toworkforce pipeline.

The grant is part of a larger, \$56 million NSF initiative to bolster innovative and adaptive research infrastructure across the country. Broader research impacts include the longterm sustainability of improved crop and vegetable yields.



Srinivas Janaswamy





Beads will encapsulate the microbial fertilizer in the soil.

SDSU Extension Programs Address Economic Questions

Candy DenOuden



eather Gessner stands in front of about 30 students in the Edgar S. McFadden Biostress Lab in mid-November on South Dakota State University's Campus and opens class with an ice breaker.

"Who has something good to share?"

After a few happy updates, Gessner dives into particulars. Exams and final projects are coming up. And today's class features an attorney from Watertown who specializes in estate planning.

The new course, Returning to the Farm, was born of the success of the SDSU Extension Sustaining the Legacy conference series. Gessner, the SDSU Extension Livestock Business Management Field Specialist who teaches the course and organizes the conference series, said it's a different way to approach the same subject matter.

"We're still working with their estate plan but getting the information to 20-year-olds instead of 70-year-olds," she said.

It's a typical day for Gessner, who started her day talking to the SDSU Extension BeefSD cohort about working with landowners on developing a rental agreement, then spoke to another class on agriculture policy before finishing her day with her own class.

"In SDSU Extension, we provide the information and education, and tie in resources for assistance," said Gessner. "The individualization is what it takes to make each of those programs work."

Gessner said she leverages her 22 years of experience and education to provide specific instruction with a common mission: to help producers maintain profitability and sustainability. Two of the programs she leads, Sustaining the Legacy and Ag Economic Dialogues, both work toward that mission in unique ways.

More than 1,000 people have attended Sustaining the Legacy since it started in 2006. The estate planning conference series helps farmers and ranchers successfully transfer their operations to the next generation. The conferences are held several times a year across South Dakota, typically for one day per week for three weeks.

Each session brings in industry experts like accountants, insurance agents and attorneys who specialize in agricultural estate planning, taxes, etc. Gessner carefully vets speakers to ensure they provide unbiased information about estate planning products and options.

"I don't have an agenda for selling them any products," Gessner said. "Every presenter who comes into the sessions is there to teach them about the products – the good and bad, when to use it, when not to use it."

The conferences accomplish the dual purpose of educating people



Heather Gessner, SDSU Extension Livestock Business Management Specialist, engaging with SDSU students during her Returning to the Farm course. The class evolved out of her Sustaining the Legacy estate planning conference series, which has served more that 1,000 people since its 2006 inception.

while connecting them to the experts in their region, Gessner said. In addition, Gessner said Sustaining the Legacy is designed for families to attend together and start having conversations that aren't always easy to have.

Sometimes people can create plans during the conference series, other times it puts people in touch with the right expert – and sometimes it just helps families identify and communicate their goals.

"They don't have to know all the tools to use, but they have to be able to tell the professional what they want to have happen," Gessner said.

Ag Economic Dialogues

Gessner and the rest of the SDSU Extension economics team started hosting another popular program, the Ag Economic Dialogues series, at the end of 2018 to address current economic issues that farmers and ranchers face.

The free monthly series is virtual and speakers usually cover two topics during each hour-long session. Topics focus on current events, from market outlooks to macroeconomic issues to production input costs.

In summer 2022, for example, fertilizer costs were a hot-button issue, so Ag Economics Dialogues hosted a session in July 2022 discussing ways to optimize fertilizer use. She credits the energy and ideas from the SDSU Extension economics team to keeping topics relevant and educational.

"We try not to schedule topics too far in advance, because what if something changes?" Gessner said.

What was originally geared toward farmers and ranchers now also draws agricultural lenders, seed dealers, insurance agents, government agencies, farm service providers – "anybody that is

touched by agriculture," Gessner said.

"Does that make it tricky to put a presentation together?" Gessner said with a chuckle. "Yes."

Sometimes the expanded audience means taking a birds-eye view of topics, but Gessner said participants still let her know it gives them a chance to dig into what's happening in the industry.

The numbers bear that out. Registration has grown from about 20 participants the first year to nearly 100. Gessner said usually about 40 to 50 people watch the session live, with another 50 watching the video once it is posted on the SDSU Extension YouTube channel.

"It's a great outreach vehicle for us," Gessner said.

Future Sustaining the Legacy events

Remaining events in 2024 are Feb. 6, 13 and 20 at the SDSU Extension Aberdeen Regional Center; and March 5, 12 and 19 at the SDSU Extension Watertown Regional Center. Tickets are \$80 per person. People can register up to the day of the event if space is available. To learn more, visit extension.sdstate.edu/events and search for "legacy".

Ag Economic Dialogues

The 2024 monthly series will start in January. To register, visit extension.sdstate.edu/events and search for "dialogues". One-click registration for the entire year is available.

For more information on either program, contact Heather Gessner, SDSU Extension Livestock Business Management Field Specialist, at Heather.Gessner@sdstate.edu or 605-782-3290.

Big Dreams, Bigger Successes

SDSU Extension Community Vitality built on foundation of empowering people

Candy DenOuden

wenty years ago, SDSU Extension did not have community development as a formal area of expertise. That began to change in 2004 when SDSU Extension Director Karla Trautman, then a program leader, started discussing the potential of community development as a capstone.

Then the phone rang. The Northwest Area Foundation in St. Paul, Minnesota, wanted to partner with SDSU Extension on a new program called Horizons.

Now a full-fledged capstone within SDSU Extension, community development – since renamed Community Vitality – has evolved and grown in the last 20 years. Both Trautman and Kari O'Neill, retired SDSU Extension Community Vitality Program Manager, agree the community work they did through Horizons laid the foundation for what would become a successfully thriving SDSU Extension Community Vitality program.

"Even for tiny communities that went through Horizons, they still use those processes," O'Neill said. "We left something there that they can still use on their own." Over three rounds that each lasted 18 months, SDSU Extension worked with 38 South Dakota communities through Horizons, which challenged rural community members to address poverty and leadership development. Communities took part in small group discussions, study circles, leadership training, visioning and strategic planning and had to meet goals throughout the process.

"It was very intense," said O'Neill. "It was a multi-faceted program that took a lot of commitment from communities. But it was game-changing for all of us that were involved in it."

Those experiences helped Community Vitality build some of its signature programs like Marketing Hometown America, the Building Highly Effective Boards curriculum, strategic planning for communities and the annual Energize! conference. All of them are rooted in the same philosophy of helping communities build their own capacity to handle challenges and thrive.

"That's our job — to help communities build sustainability to carry on the work

after we're gone," Trautman said. "That's what Horizons did for us. It was a way for us to engage communities, build resources and define how we want to do business."

Like Horizons, Marketing Hometown America starts with trying to get as many community members involved as possible. Facilitators help community members identify their strengths and weaknesses, pinpoint goals and aspirations, and designate people to champion projects. O'Neill said sometimes helping community members shift their mindset from "we can't do that" to "yes we can" is all it takes to unlock a new momentum.

Nine communities have gone through the Marketing Hometown America program since it started in 2016. One of them is Martin, a community of about 1,100 people in southwestern South Dakota.

As Martin went through Marketing Hometown America it undertook a citywide rebranding effort called Revitalizing Martin. Using sunflowers as their inspiration, the community









Kari O'Neill, retired SDSU Extension Community Vitality Program Manager leads a small group community discussion.

painted a sunflower on the water tower and is working on a sunflower festival. Community members are also trying to improve safety along Highway 18, the town's main thoroughfare.

O'Neill and her team also developed the Building Highly Effective Boards curriculum, which teaches South Dakota board members how to thrive in their roles through specialized training.

Another hallmark Community Vitality program is the Energize! conference, an annual event designed to invigorate and showcase South Dakota communities with fewer than 5,000 people. The premise is simple, but unique: rather than inviting small community leaders to gather at a larger city hub, Energize! is held in small communities like Lemmon or Wessington Springs.

It's a valuable time for community leaders from across the state to network, hear success stories from other similarly sized communities and, importantly, provides the host communities a chance to shine. Trautman said having smaller

communities host the conference makes it deeply organic and infuses everyone who attends with hope for their own efforts.

Also propelled by post-Horizons momentum, early community development efforts gathered survey results showing South Dakotans were interested in learning more about local foods initiatives and tourism. Today, SDSU Extension is an active partner in both areas. One of O'Neill's favorite projects was the Dakota Fresh Food Hub, a farmer-owned collective created in 2016 to help producers market their products directly.

"The food hub was a really new idea in South Dakota and required collaboration with many different groups," O'Neill said. "I love work like that. Any time I can meet new people who are passionate about what they're doing, it makes me excited to give them more resources that might help them."

Partnering with other organizations and agencies across South Dakota has been key to Community Vitality's success, as has working closely with Extension professionals in neighboring states. Developing and maintaining those relationships also helps position SDSU Extension to connect people with the right expert or resource at the right time.

"Sometimes we're the expert in front of the room and sometimes we're the connector, the facilitator," Trautman said. "We do have the expertise in bringing the community together."

As Community Vitality approaches 20 years of helping South Dakota communities thrive, O'Neill and Trautman said they are proud of the work that's been done and are excited to see those efforts continue in the future.

"I'm really proud of the team that we've created, the expertise we've created and their commitment to that foundation to how we do community vitality work," Trautman said. "We worked hard to build that foundation, and I think we hit the right formula."







CAFES News & Updates

First Annual CAFES Dean's Pheasant Hunt

South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences Joe Cassady recently hosted the first annual CAFES Dean's Pheasant Hunt. The event provided an opportunity for Dean Cassady to engage with stakeholders, enjoy South Dakota's natural resources and raise funds for the College. The hunt included a banquet, fantastic meals and two days of hunting. Dean Cassady is looking forward to continuing the tradition in 2024 with expanded opportunities for hunters.

For more information about how to participate, please contact Mark Sandager, CAFES Development Director at Mark.Sandager@sdsufoundation.org.



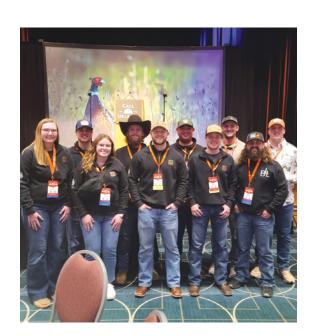
South Dakota State University Pheasants Forever Chapter

he South Dakota State University Pheasants
Forever Chapter is one of only four collegiate
chapters within the national organization of
Pheasants and Quail Forever. Housed within
the SDSU Department of Natural Resource
Management, the SDSU chapter involves college
students into the mission of Pheasants Forever
by providing a variety of hands-on experiences
throughout the year.

Pheasants Forever's mission is to conserve pheasants, quail, and other wildlife through habitat improvements, public access, education, and conservation advocacy.

Some of the SDSU chapter's activities throughout the year include shooting events, habitat work, chapter hunts, and an annual banquet. The members of the SDSU Pheasants Forever Chapter also attend the National Pheasant Fest. Lora Perkins is the club adviser.

Follow the chapter on social media on Instagram – sdstate_pheasantsforever or Facebook – South Dakota State University Pheasants Forever Chapter.



SDSU Extension experts receive national awards

National Extension Association for Family and Consumer Sciences

- SDSU Extension's Mental Health First Aid team, Excellence in Extension Team Award. The Mental Health First Aid team comprises Audrey Rider, SDSU Extension Early Childhood Field Specialist; Lorna Saboe-Wounded Head, SDSU Extension Family Resource Management Field Specialist; Heather Gessner, SDSU Extension Livestock Business Management Field Specialist; Peggy Schlechter, SDSU Extension Community Vitality Field Specialist; Andrea Bjornestad, associate professor and SDSU Extension Mental Health Specialist; Samantha DeVaney, SDSU Extension Supplemental Nutrition Assistance Program Education (SNAP-Ed) and Expanded Food and Nutrition Education Program (EFNEP) Program Manager; Jane Amiotte, SDSU Extension 4-H Youth Program Advisor - Pennington County; Michelle May, former SDSU Extension 4-H Youth Program Advisor - Butte/Lawrence counties; Kaycee Jones, former SDSU Extension 4-H
- Youth Program Advisor Haakon/ Jackson counties; and Jennifer Ringkob, SDSU Extension 4-H Youth Program Advisor – Marshall/Day counties.
- SDSU Extension Early Childhood
 Field Specialist Audrey Rider, regional
 and national Excellence in Multi-State
 Collaboration Award for the Fit and
 Healthy Kids online training series.

SD Association of Agricultural Extension Professionals and National Association of County Agricultural Agents

- Amanda Bachmann, SDSU
 Extension Pesticide Education and
 Urban Entomology Field Specialist,
 Distinguished Service Award.
- Jaelyn Whaley, SDSU Extension Sheep Field Specialist, Achievement Award.
- The SDSU Extension Agronomy team, national finalist in the Search for Excellence in Crop Production for the Crop Hour webinar series.
- Patrick Wagner, SDSU Extension
 Entomology Field Specialist, North
 Central Region winner and national finalist in the Published Photo category for his photo of a damaged potato plant.

• Sara Bauder, SDSU Extension Forage Field Specialist, North Central Region winner and national finalist in the "Personal Column" category for her bi-weekly column, "Sow and Grow with Sara."

National Association of Extension 4-H Youth Development Professionals

- SDSU Extension 4-H Youth Program Advisors Sara Koepke, Grant County; Jodi Loehrer, Codington County; Sonia Mack, Brookings County; Jennifer Ringkob, Day and Marshall counties; Debra Lessman, Deuel County; Lauren Sankey – Roberts County, North Central Region Award Winner in Excellence in Teamwork – 4-H DASH.
- Sara Koepke, SDSU Extension 4-H
 Youth Program Advisor Grant
 County, North Central Region Award
 Winner and National Award Winner
 in Greg Yost Memorial Youth in
 Leadership 4-H Bike Rodeo and
 Safety.
- Jennifer Ringkob, SDSU Extension
 4-H Youth Program Advisor Day and Marshall counties, Distinguished Service Award.

Tim Czmowski

named SDSU Distinguished Alumni

SDSU Alumni Association



Tim Czmowski, a 1985 South Dakota State University dairy manufacturing graduate, was recently honored as one of six SDSU Distinguished Alumni. He retired in May 2022 after nearly 40 years in the cheese industry, the last 12 with Agropur, an international dairy firm, as its Midwest vice president for U.S. Operations. His career involved all aspects of cheese and whey plant leadership and operations, including plant construction, process equipment design and industry growth.

Since 1995, Czmowski has served as an expert judge in the U.S. and World Cheese Contests, being named assistant chief judge in 2005.

Having a passion for cheese and working with people, he has been instrumental in helping grow South Dakota's dairy industry

while encouraging investment in SDSU dairy programs.

In 2008, he was a key leader in the establishment of the new cheese plant in Hull, Iowa. Following Agropur's purchase of the plant in Lake Norden, Czmowski lead the expansion efforts that tripled its production capacity in 2019 and added \$1 billion to the local economy. As a member of South Dakota Gov. Dennis Daugaard's Ag Advisory Team, he worked closely with dairy organizations and state agencies to successfully recruit dairy farmers to South Dakota.

Czmowski was recognized during the SDSU Alumni Association's Legends and Leaders celebration as part of the 2023 Hobo Day festivities.

CARSON NOEKER



CAFES student credits athletic success to rural roots

Kristen Smith

South Dakota State University freshman, Carson Noecker wrapped up his first cross-country season for the Jackrabbits feeling fulfilled and thankful.

Noecker was raised on a row crop, dairy and beef cattle operation near Hartington, Nebraska. Running and agriculture have been a large part of Noecker's life.

During high school, Noecker was a four-time Nebraska state cross country champion, a three-time state track and field champion in the two mile and a two-time champion in the mile and 4x800. He was also actively involved in 4-H and FFA. During his time in FFA, Noecker competed in livestock judging and dairy judging. This past summer was the first he wasn't showing, instead, he helped work his county's 4-H contest at the beef and dairy show.

Noecker credits his success to his upbringing. "You learn a lot of lessons from working on a farm. High accomplishments take a lot of time, work and effort - they go hand in hand," Noecker said.

After his initial visit to SDSU, Noecker liked the array of topics and classes that the agricultural science major has to offer students and how easily it relates to life on the farm.

As a CAFES student, Noecker says he appreciates having the opportunity to network and learn from other students and their operations within the industry. His favorite class has been Cody Wright's Ruminant Livestock Production class.

In his transition from high school athletics to college, Noecker has learned meaningful lessons including the importance of taking better care of his body and working on the small things to better his craft.

Learning in the classroom has been very important, but he also says the lessons he's learned on the course from his coaches, teammates and other competitors stand out to him. As a student-athlete, he is grateful for the support that he and his team have received from the SDSU Athletic Department.

"I think we ended the best way we could this season, as being named Summit League Champions for the eighth season in a row means a lot," Noecker said.

Noecker finished this race 20 seconds ahead of the competition that awarded him Championship MVP, Newcomers of the Championship and all-league first-team honors.

Most recently, Noecker has been named Summit League Male Athlete of the year. He is the third Jackrabbit consecutively to receive this honor.

With a week before the indoor track season begins, you will find Noecker reestablishing himself by going on his runs at his own pace, being able to be the one to dictate how his body feels.

When it comes to running, Noecker follows in the footsteps of his two older brothers and hasn't looked back since.

"My success and support have helped me keep going – it just carries over. You start to build a habit and it sticks with you," Noecker said.

To stay consistent in the course and classroom, Noecker credits the habits he has created for himself, such as attending class and getting homework done.

"When you go the extra mile and do the small things they turn into big things, making you mentally stronger," Noecker said.

After school, Noeker plans to go back home to continue working on the family farm

POET Bioproducts Center officially opens with ribbon-cutting ceremony

Addison DeHaven

igher education leaders, legislators, industry partners and leading scientists gathered on Oct. 11, 2023, for the official opening of the POET Bioproducts Center in Brookings.

The POET Bioproducts Center, located in the Research Park at SDSU, will bring researchers from SDSU and South Dakota School of Mines and Technology together with industry partners to scale up innovative biotechnologies and diversify South Dakota's economy.

"University research impacts economic growth in our communities through the commercialization of new and innovative ideas that solve real world problems," SDSU President Barry Dunn said. "That process requires investment in cutting-edge facilities, like the one we are celebrating today."

The center will focus on two specialization areas: specialty animal feeds, specifically prebiotics and probiotics that have the potential to reduce the need for antibiotics, and biomaterials, including bioplastics that are degradable. SDSU's strengths are on the feedstock and bioprocessing side, while Mines is strong on the bioprocessing side.

"This specialized facility with the specialized expertise that goes with it is the latest provision of the Research Park at SDSU for the purposes of fostering public-private partnering to move university-sourced technology and innovation into the marketplace," said Daniel Scholl, vice president for research and economic development at SDSU.

A 45,000-square-foot facility, the new center was made possible through \$20 million in legislative funding, \$5 million from POET and \$2 million from South Dakota Corn. The South Dakota Soybean Research and Promotion Council provided an additional \$500,000 annually for five years—a total of \$2.5 million—and the state of South Dakota

has committed \$500,000 yearly for operational costs.

Another \$3 million from the U.S. Economic Development Administration is slotted for the purchase of specialized equipment needed for the labs.

The facility is expected to produce more than \$6 million annually from research expenditures, and more than \$4 million annually toward South Dakota industries. It will also provide jobs for highly trained scientists and engineers, and administrative, operations and accounting positions.

POET, headquartered in Sioux Falls, is a global leader in the production of bioproducts and will provide innovation around commercial-scale development for the center. To facilitate the public-private partnerships that are expected to emerge from the lab, a not-for-profit organization, Dakota BioWorx, will manage the center.



JACK RABBITS NOW & THEN



Tessa Erdmann

Major: Agricultural Communications

Minor: Digital and Social Media, Marketing, Public Relations, Professional Writing

Hometown: Groton, South Dakota

Graduation Year: May 2025

Why did you choose your major?

🔔 I started college majoring in Agricultural Business and Economics and quickly realized that the classes within those majors did not interest me. However, I wasn't sure what would. All I knew was that I loved to talk about agriculture, but I did not know how or where I could incorporate that into a future career. Close mentors encouraged me to try agricultural communications. The first class I took within the major was Basic News Writing, now called Basic Media Writing, and for a person who hated writing, I did not see it going well, nor the major sticking. After just a few weeks in the class, I fell in love with writing. Throughout the class, our assignments were to write stories on whatever we wanted to be published in The Collegian. This experience allowed me to bring more agricultural stories to our university newspaper, meet many incredible people, and share their stories with our readers. After this class, I felt like I had finally figured out a major I was interested in, and it helped me find my purpose within the agricultural industry.

What extra-curricular activities are you involved in on campus?

A. I am involved in Little International as the Communications Coordinator on the Executive Team and the past President of Sigma Alpha-Omega; I serve as the 2023-2024 CAFES Advocate and am a student employee/intern for the CAFES Marketing and Communications Team. I am also a member of Agriculture Future of America and Agricultural Communicators of Tomorrow. Being involved is genuinely one of my favorite things about attending SDSU. Through student clubs and organizations, I have had the opportunity to meet some of my best friends, and this has allowed me to grow both personally and professionally.

If you could describe yourself in one word, what would it be and why?

A. If I could describe myself in one word, it would be AGvocate (agricultural advocate). I have chosen this word because I am passionate about sharing the story of agriculture with everyone I meet by advocating for our great industry and the people within it.

What brought you to SDSU?

A. Growing up being actively involved in FFA and 4-H, SDSU was a place I was often going. Whether it was for livestock judging or the State FFA Convention, I always found myself on the SDSU campus. When it came down to where to attend, I knew I wanted to go to a place that felt like "home," and SDSU was that for me.

. What is your favorite flavor of SDSU ice cream?

A. Barry Berry.

John Stubbendick

Degrees: Precision Agriculture, B.S.

Years at SDSU: 2015-2019

Hometown: Avoca. Nebraska

Current City: None, I travel full-time doing experimental testing



Q. What extra-curricular activities did you participate in while at SDSU?

A. Cru and AST Club.

Q. Who and/or what originally inspired you to pursue a career in this field?

A. My dad inspired me to pursue a career in ag. I grew up working alongside him on our family farm and I have never wanted to do anything besides work in agriculture.

Q. How has your background prepared you for your career?

A. I grew up working on the family farm, which gave me a passion for farming and valuable experience in the industry. My coursework in Precision Ag and Agronomy helped, but I would say that the Computer Science classes I took at SDSU were surprisingly relevant to my career. Modern farm equipment is just a computer on wheels, so having a base understanding of how the programming environment works has been helpful in both my field support and testing roles.

Q. What has been most rewarding about your career thus far?

A. Leaving college I thought that the most rewarding part would be getting to work with the latest technology. While that is a lot of fun, the most rewarding part has been the relationships I have built over the years with customers as well as coworkers.

Q. As an alum, why would you encourage other young adults to consider a career in this industry?

A. There are endless opportunities for people passionate about agriculture whether you want to work with people, build the next big thing, or grow the food yourself.

Q. Do you have any previous mentors or professors from your time at SDSU that have been influential to your career success today?

A. Van Kelley and Nic Uilk were both very influential for me while I was at SDSU. Both of them taught me the importance of being knowledgeable on your product while building deep connections with your clients. Agriculture is still a very relationship-driven industry where an equipment dealer or seed salesman often becomes a trusted adviser.

Saying 'yes'

I have the privilege of speaking with many of our alumni, and while it's not always articulated the same way, there is a common theme in every conversation: "The college experience is so much more than coursework and grades."

I came to SDSU with my immediate family being five hours away and no known friends attending the school. However, since my initial campus tour of SDSU in 2005, I could sense a community I wanted to be part of and was hopeful of opportunities I could say "yes" to.

Through saying yes, I was greeted with a multitude of opportunities, including the swim team, international travels, student association and countless other clubs and organizations. I firmly believe that the experiences and lessons learned through those extracurricular activities cultivated the person I am today. Formal education is important; however, it is not just what happened in the classroom that made me the individual I am today. It was the entirety of the four years I spent on campus. I was pushed, pulled and stretched in so many ways that I couldn't help but evolve into a different person upon graduation.

South Dakota Corn Endowed Dean Joe Cassady understands better than anyone that getting students to say yes for the first time can be a challenge (the second time is much easier). Dean Cassady has taken it upon himself to incentivize students to take advantage of an opportunity by awarding a small stipend to any student who wants to have an international travel experience. He can do this with the funds generated by the South Dakota Corn Endowment. The \$500 award has opened the door to a whole new world of opportunity and a lifetime of saying yes.

When students say yes to the opportunities they have on campus, they are more ready and willing to say yes to opportunities they'll have as citizens in the communities they live in. What tools do we need to give our students to make saying yes part of their personality?

Mark Sandager, '11











OUR STUDENTS HAVE BOLD DREAMS AND AMBITIONS FOR THEIR FUTURE.

Scholarships change their lives and contribute to their success at SDSU.



sdstatefoundation.org/scholarships (605) 697-7475 | info@sdstatefoundation.org 815 Medary Avenue, Brookings, SD 57006 Berg Agricultural Hall 1148 Medary Ave. Brookings, SD 57007

2024 Schedule of Events

SDSU Lamb Bonanza Women's Basketball Game vs. Denver Saturday, January 13 1 p.m.

SDSU, Brookings and 4-H Day at the Capitol

Wednesday, January 17

SDSU Black Hills Stock Show Alumni Reception Saturday, February 3

Saturday, February 3 3-5 p.m. MT

SDSU 2024 Data Science Symposium on the SDSU Campus

Monday, February 5 6-10 p.m.

SDSU Pork Classic Basketball Game vs. Oral Roberts University

Saturday, February 10 3 p.m.

SDSU Little International

Friday- Saturday, April 5-6 8 a.m.-5 p.m.

SDSU Bull Sale

Friday, April 12

Commencement Saturday, May 4

Energize!

Wednesday-Thursday, May 22-23

SkillsX by 4-H

Monday-Friday, June 3-7

Dakota Lakes Research Farm Field Day

Thursday, June 27

Southeast Research Farm Field Days

> Tuesday, July 9 and Thursday, September 12

Northeast Research Farm Field Day
TBD