



GROWING

SOUTH DAKOTA

A MAGAZINE BY SOUTH DAKOTA STATE UNIVERSITY | FALL 2023
COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENTAL SCIENCES



FROM THE DEAN:



Welcome to the Fall 2023 edition of Growing South Dakota! The fall semester has begun, and students have returned to campus. The excitement and energy that the students bring to campus is always welcome.

Following a long period of stability, there have been many changes to the CAFES leadership team. We are excited to welcome Dr. James Connors as Associate Dean and Director of Academic Programs. Dr. Connors comes to us from the University of Idaho and fills the position vacated by Dr. Vikram Mistry who retired June 21st. Dr. John Jaeger joins us as Department Head of Animal Science and had a successful career at Kansas State University prior to coming to SDSU. Dr. Kasiviswanathan Muthukumarappan has been promoted to Department Head of Agricultural and Biosystems Engineering after serving on the faculty in that department for over 25 years, and Dr. Kristi Cammack has been promoted to Assistant Dean of West River Operations. I am very excited about our new leadership team, and you can learn more about these individuals in this issue.

Our faculty, students and alumni continue to be recognized both locally and nationally for their excellence. A few of those individuals are highlighted in this issue. Another exciting event is the reopening of Berg Agricultural Hall. As many of you know, Berg Ag Hall has been undergoing renovation over the past two years. The upgrades to the facility are a critical step to meeting the future needs of CAFES for teaching, research and Extension. We are excited to have you visit Berg Ag Hall when you are on campus this fall. None of these accomplishments would be possible without the support of our alumni and friends.

This year's One Day for STATE will be September 7th. I hope you will join Jackrabbits from across the world in supporting our students, faculty and staff by participating in One Day for STATE. Go Jacks!

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

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SOUTH DAKOTA

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BACK-TO-BACK

Champions

BY DAVE GRAVES

South Dakota State University has pulled out another international championship—this one in the field of quarter-scale tractors.

While the football team grabbed a lot of attention with its first-ever Football Championship Series national title in January, the students on the quarter-scale tractor team brought home international honors for the second year in a row and third time in the past five years.

They were competing in the International Quarter-Scale

Tractor Student Design Competition organized by the American Society of Agricultural and Biological Engineers, which held the annual contest June 1-4 at the Expo Gardens Fairgrounds in Peoria, Illinois.

In addition to topping 18 other teams in the overall competition, SDSU finished first in performance, presentation and design judging; second in durability and third in maneuverability, tractor pull and defense of design as well as winning the craftsmanship and ergonomics awards.

Instructor Douglas Prairie, adviser of the 20-member club, said, "This year's winning team is a testament to a goal that was set a year ago by the team to bring home another national championship and then strategically executed on that goal this year. The team put in thousands of hours outside of class along with some extra late nights at the competition to bring the championship trophy back to Brookings!"

Team 'pushed boundaries' in design

Phillip Black, an incoming senior from Gibbon, Minnesota, served as president of the SDSU Quarter-Scale Tractor Club in 2022-23.

"Last year was a tractor that was in our comfort zone. This year's tractor we really pushed the boundaries on what we could design," he said. A lot of the additions were related to electronics, such as having the transmission shift with actuators rather than linkage and using electric actuators for power steering.

Other new developments were the addition of an air ride seat and adjustable shocks as well as a digital screen to display gauges for readings on RPM, engine temperature, fuel and air pressure in the tires and shocks.

While this year's model (RF-1 for Rabbit Force 1) bears many resemblances to the 2022 model, it was built from the ground up, Black said.

Same engine, same tires; different designs

All teams are given a 31-horsepower Briggs & Stratton engine and a set of Titan tires. The design of their tractor is up to them. A panel of industry experts then judge each design for innovation, manufacturability, serviceability, safety, sound level and ergonomics. Teams also submit a written design report in advance of the competition, and on-site, they must sell their design in a formal presentation to industry experts playing the role of a corporate management team.

Finally, machines are put to the test in three performance events—three tractor pulls, a maneuverability course and a durability course.

The durability course is a timed event through an oval course of bumps and loose soil while towing a weighted cart. Teams compete in the timed event by individually completing eight laps on a 250-foot course in less than 20 minutes.

Performance at the contest makes up 40% of the scoring with the remainder focused on various facets of design and the teams' presentation to judges. Black noted the contest is sponsored by major ag equipment manufacturers, which also provide judges. They're interested in what students can do in terms of design, and a lot of contest participants end up being hired by the firms, Black said.

"Last year was a tractor that was in our comfort zone. This year's tractor we really pushed the boundaries on what we could design."

- Phillip Black



Members come from several majors

SDSU's prior success has made the club an attraction for agricultural-oriented students from a variety of majors— agricultural and biosystems engineering, mechanical engineering, agricultural systems technology, precision agriculture and even computer science. "Because we've been successful, we've built up a big team, and that allows us to do more," said Black, who has been on the team three years.

"I wanted to get involved with something on campus. I was always a little interested in tractor pulling. I grew up on a farm. I like to wrench on things and hang out with a group of cool guys," he said of his quarter-scale involvement.

Team members left Brookings for Peoria May 31, 2023. "We were going in there knowing we had a real shot of winning the competition because we had spent so much time engineering all the advanced features, and we knew we would be good in performance because of how we have performed in the past," Black said.

The team had the tractor ready to drive by spring break (early March) and then tore it apart to send it out for painting. It was reassembled in April and ready for testing during finals week (early May), he said.

Planning for another title in '24

While the contest ran June 1-4, 2023, there is no continuous scoring. So teams don't know exactly where they sit even at the awards banquet, when placers in the various judging categories are announced. Based on that, Black and his teammates knew their hard work and dedication would bear some fruit.

Overall placers were announced last, going from fifth place to first.

"When second place was announced and it wasn't us, we got pretty excited," Black said.

In addition to winning the 2022 and 2023 titles, which included a large trophy and a \$1,500 cash prize each year, SDSU also won the title in 2018 and was runner-up in 2017 and 2019. COVID-19 canceled 2020's contest. The 2021 contest was a hybrid adventure with SDSU only competing online and finishing fourth.

Black expects to be back with the team for the 2024 contest and would love to see his college career end with another quarter-scale tractor title.

"We're hard workers. We're dedicated and the department pushes us to do our best," he said.

2022

INTERNATIONAL
CHAMPION TEAM



2018

INTERNATIONAL
CHAMPION TEAM



CAFES WELCOMES NEW MEMBERS TO THE

College Leadership Team

BY LORA BERG, ANDREA HAMMER, KENNEDY TESCH & NICOLE HUDSON

The College of Agriculture, Food and Environmental Sciences leadership team is undergoing a series of transitions due to retirements of several long-serving SDSU leaders. CAFES students, faculty and staff members are excited to both welcome our new leaders and provide enthusiastic support to those who have stepped up to assume new areas of responsibility.

Individuals serving on the CAFES Leadership Team include:

Joseph Cassady

South Dakota Corn Endowed Dean

James Connors

Associate Dean and Director of Academic Programs

Kristi Cammack

Assistant Dean of West River Operations

Karla Trautman

Director of SDSU Extension

Russ Daly

Interim Director of the South Dakota Agricultural Experiment Station and Associate Dean of Research

Jessica Rients

Director of Ag Shared Service Center

Lora Berg

Director of Marketing and Communications

David Wright

Maynard A. Klingbeil Endowed Department Head of Agronomy, Horticulture and Plant Science

John Jaeger

Head of the Department of Animal Science

Sanjeev Anand

Interim Head of the Department of Dairy and Food Science

Kasiviswanathan Muthukumarappan

Klingbeil Endowed Department Head and Distinguished Professor of Agricultural and Biosystems Engineering

Michele Dudash

Head of the Department of Natural Resource Management

Angela Pillatzki

Head of the Department of Veterinary and Biomedical Sciences

Joseph Santos

Director of the Ness School of Management and Economics

Kristi Cammack

ASSISTANT DEAN OF WEST RIVER OPERATIONS

Kristi Cammack was appointed the Assistant Dean of West River Operations and Director of SDSU West River Research and Extension in Rapid City, South Dakota, in February 2023. In this position, Cammack guides the operations of SDSU's Cottonwood Field Station near Philip, South Dakota, and the West River Research Farm at Sturgis, South Dakota. She also provides oversight of staff, research and outreach activities at the West River Research and Extension Center.

Previously, Cammack had served as Director of West River Research and Extension since 2016.

"Dr. Cammack's role and contributions have increased dramatically during her time at SDSU, and we are excited to provide her with an opportunity to move into this position that better reflects her contributions to the College of Agriculture, Food and Environmental Sciences," said Joseph Cassady, South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences.

During her time at SDSU, Cammack has been instrumental in establishing the Wizipan Leadership and Sustainability program, a collaboration between the Indian University of North America, the Crazy Horse Memorial Foundation and South Dakota State University. Cammack has also served as the first director of the SDSU Center of Excellence for Bison Studies since it was launched in 2020.

Most recently, Cammack's leadership also helped secure the largest grant award in SDSU history, announced in September 2022. She is the principal investigator for the \$80 million USDA Partnership for Climate-Smart Commodities Initiative grant project entitled, "The Grass is Greener on the Other Side: Developing Climate-Smart Beef and Bison Commodities." The project will reward producers for implementing climate-smart grazing and land management practices, researching novel practices and creating market opportunities for beef and bison producers.



James Connors

ASSOCIATE DEAN AND DIRECTOR OF ACADEMIC PROGRAMS



James Connors has been selected to serve as the new Associate Dean and Director of Academic Programs for the College of Agriculture, Food and Environmental Sciences (CAFES) at South Dakota State University.

Connors comes to CAFES with extensive teaching, research and Extension expertise, having earned his bachelor's, master's and doctoral degrees in agricultural and extension education from Michigan State University with emphases in agribusiness, natural resources, teacher education, adult and continuing education and education administration. Most recently, he spent the past 15 years of his career at the University of Idaho where he served as a professor, the chair of the Department of Agricultural Education, Leadership and Communications in their College of Agricultural and Life Sciences, as well as their interim state 4-H director.

Connors is eager to work with the

students, faculty and staff within CAFES to build up their knowledge, skills and appreciation for the agricultural industry. When asked about the goals he has for his new role, he said that he hopes to continue the strong tradition of challenging academics, student support and stakeholder outreach that his predecessors have established.

"I'm looking forward to working with the faculty, administrators and students to offer impactful undergraduate and graduate programs that are needed for the future leaders of agriculture in South Dakota, the nation and across the world," said Connors.

Mary Christensen, academic advisor and coordinator of the agricultural leadership, education, communication and science program, was appointed as the Interim Associate Dean and Director of Academic Programs on June 22, 2023, and provided leadership in the role until Connors began his appointment in mid-August.

Kasiviswanathan Muthukumarappan

KLINGBEIL ENDOWED DEPARTMENT HEAD AND DISTINGUISHED PROFESSOR OF AGRICULTURAL AND BIOSYSTEMS ENGINEERING

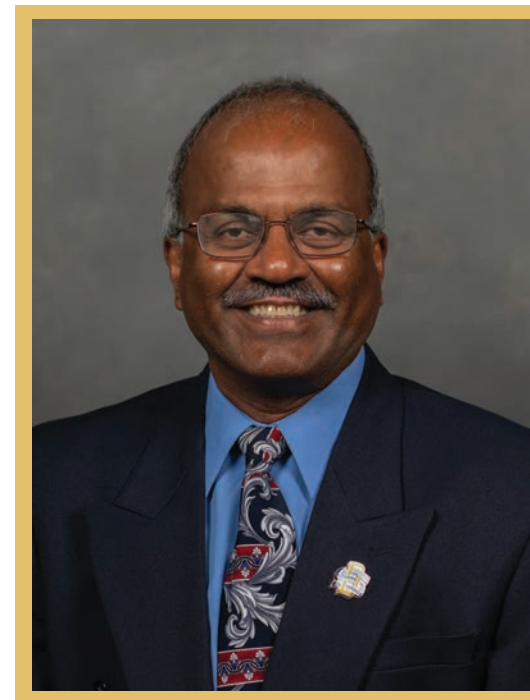
Kasiviswanathan Muthukumarappan was appointed as the inaugural Klingbeil Endowed Department Head and Distinguished Professor of the Department of Agricultural and Biosystems Engineering in March 2023.

As department head, Muthukumarappan will lead the department in accomplishing their mission of improving the world's food production systems and available natural resources for an enhanced agricultural future. Muthukumarappan plans to focus on improving efficiency and retention within the department, while remaining persistent in disseminating their knowledge and research.

"We want to continue to recruit high quality people on all levels, from faculty to students, and make sure they feel a part of the team from the start," said Muthukumarappan. "We accomplish a lot in this department, and I want to increase the number of our faculty and students both working with local stakeholders and going outside of the state to share the great things that happen here at SDSU."

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 Ph.D. in agricultural engineering from the University of Wisconsin-Madison in 1993, Muthukumarappan then served as an associate researcher in their Department of Biological Systems Engineering until August 1997.

Joining the SDSU Department of Agricultural and Biosystems Engineering as an assistant professor in 1997, Muthukumarappan rose through the professorial ranks and earned the title of SDSU Distinguished Professor in 2013. Over the years, he has developed an internationally-recognized research program in bioprocessing with an emphasis on producing energy, materials and chemicals from renewable sources.



John Jaeger

HEAD OF THE DEPARTMENT OF ANIMAL SCIENCE



John Jaeger has been selected to serve as the next Head of the Department of Animal Science at South Dakota State University.

“Dr. Jaeger brings a wealth of experience to the Department of Animal Science,” said Joseph Cassady, South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences. “His time in Oregon and Kansas have prepared him to serve in the department head role.”

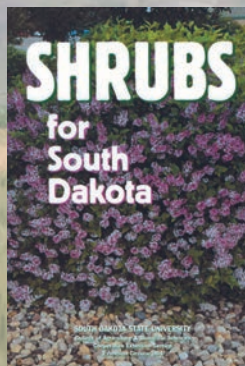
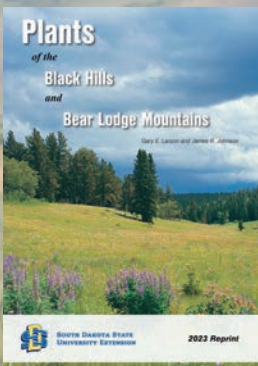
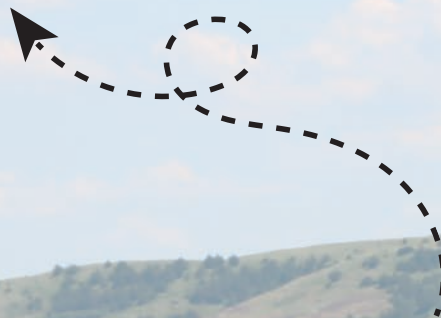
Jaeger received his bachelor’s degree in animal science from Oregon State University in 1984. In 1986 he received a master’s degree in animal science from Oregon State University. He then went on to complete his Ph.D. in animal science with emphasis in reproductive physiology at Oregon State University in 2005.

Prior to accepting this position, Jaeger spent the last 17 years at Kansas State University as a Beef Cattle Scientist located at the Agricultural Research Center in Hays, Kansas. In this position he conducted a research program focused on forage-based beef cattle production systems that include cow/calf and weaning to finish operations. This program had an emphasis on sustainable and economical conversion of grazed native forages to animal product. His research also focused on how pre-weaning calf management can improve feedlot performance and carcass quality. Additionally, he oversaw unit administration, personnel management, and budget planning and implementation.

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VIKRAM MISTRY

RETIRES AFTER NEARLY 40-YEAR CAREER DEDICATED TO DAIRY SCIENCE AND STUDENT SUCCESS

BY ANDREA HAMMER

For nearly 40 years, Vikram Mistry, Professor Emeritus and recently retired Associate Dean and Director of Academic Programs for the College of Agriculture, Food and Environmental Sciences (CAFES) at South Dakota State University, has dedicated his professional career to conducting research on dairy products to improve their quality, nutritional value and processing methods, and educating young minds preparing to enter the dairy production, dairy manufacturing and food science industries.

Growing up in India and Kenya, where he completed his primary and secondary schooling, Mistry's father was a dairy nutritionist, which sparked his interest in dairy science from a young age. That interest led him to attend college at Gujarat Agricultural University in Gujarat, India, where he earned his bachelor's degree in dairy technology. After earning his

undergraduate degree, Mistry came to the United States to attend graduate school at Cornell University where he pursued both his master's degree and Ph.D. in food and dairy science.

While working toward his graduate degrees at Cornell under the mentorship of Professor Frank Kosiowski, Mistry got his start in academia by working as a research and teaching assistant and, upon completing his doctoral degree, worked as a post-doctorate associate there before coming to SDSU in October of 1986.

"The idea of being part of a department that focused specifically on dairy science was very attractive to me, as that was my area of academic training," said Mistry.

Mistry started his SDSU career as an assistant professor in the Dairy Science Department, now known as the Department of Dairy and Food Science, became an associate professor in 1991

and earned his tenure status in 1993 before being promoted to a professor in 1996. In 2002, he was appointed as the head of the department and was later named the David A. Thompson Endowed Department Head and Professor of Dairy and Food Science in 2019, as the first person to hold an endowed department head position at SDSU.

He was appointed to serve as the Interim Associate Dean for CAFES in 2020 until June of 2022 when he became the permanent Associate Dean and Director of Academic Programs, a role in which he served until his retirement in July of 2023.

Throughout his career, Mistry has made significant contributions to dairy science through research, teaching and mentoring numerous undergraduate and graduate students. Meanwhile, he published over 60 peer reviewed papers in reputable journals, 140 abstracts of papers presented at scientific meetings, contributed to invited presentations and book chapters, co-authored one book and received two patents.

After an impactful 36-year and 9-months at SDSU, Mistry now holds Professor Emeritus designation – a lifetime title honoring a retired faculty or academic administrative staff member who has demonstrated a distinguished professional career and made significant contributions to the university.

“Dr. Mistry is to be congratulated on his highly successful career at South Dakota State University,” said Joseph Cassady, South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences. “His dedicated efforts will impact students for decades to come.”

During his almost 20 years as department head, Mistry led the efforts of raising \$9.5 million for the construction of the Davis Dairy Plant as well as the renovation of the Dairy-Microbiology building, later renamed to the Alfred Dairy Science Hall, on campus and the renovation of the Dairy Research and Training Facility. Other contributions and notable achievements include increasing undergraduate student enrollment in the Department of Dairy and Food Science by 140% and scholarships by 275%.

“Dr. Mistry nurtured a scholarship program that has grown to the point where we have more scholarships than students, so many of them receive more than one,” said David Thompson, 1964 dairy science alum and donor of the David A. Thompson Endowed Department Head position.

Among these, is an endowed scholarship sponsored by an anonymous donor in honor of Mistry that is currently providing \$2,200 each year to a dairy and food science student.

“I am very humbled to be honored in this way and am thankful to the anonymous donor for supporting our students,” said Mistry.

As Associate Dean, he oversaw all aspects of curriculum, career development, scholarships, recruitment and professional

“Dr. Mistry is the best listener I know. When you talk to him, he makes you feel like you’re the most important person in the world – in my eyes, he is irreplaceable.”

- Joey Otta

development activities of the approximately 1,800 undergraduate students across 20+ majors and six departments in CAFES.

Mistry’s passion for continued improvement has never gone unnoticed – during his time at SDSU, it was important to him to work and foster positive partnerships with key state and industry leaders to facilitate growth of the dairy

industry across South Dakota.

“He had such a positive effect on everyone in the industry and the industry gave back to help build the Davis Dairy Plant and Alfred Dairy Science Hall,” said Thompson. “His previous students still reach out to him long after they’ve graduated to discuss job offers and get his recommendations on new SDSU students to hire. He will be missed.”

Mistry says the friendships he has developed and his ability to be integrated with the dairy industry, from farm to table, and to become acquainted with so many people that have made a difference to the industry and the public, has been most rewarding about his time at SDSU.

SDSU Dairy Digest

Volume 5, August 1987

Published annually by the South Dakota State University Dairy Club

SDSU Selected to Participate in Dairy Research Center

The South Dakota State University Dairy Science Department and the Department of Food Science and Nutrition at the University of Minnesota have been jointly selected as one of six Dairy Foods Research Centers. The Center will be established in existing facilities on the two campuses, according to Dr. John Parsons, Head of the SDSU Dairy Science Department.

SDSU and 11 other colleges nationwide were selected to participate in the dairy research program. Thirty-two universities had submitted proposals for the projects. All but one of the centers chosen submitted joint proposals with neighboring universities.

“It will mean more dollars to emphasize product research and purchase equipment on our campus,” Parsons said. Funding for the center comes one-third from the National Dairy Board, one-third from matching SDSU funds provided by the Agricultural Experiment Station and one-third from the dairy industry and a national checkoff program.

Parsons said the University of Minnesota was an excellent university to combine efforts with because of its strong biotechnology in starter cultures and because SDSU has a strong undergraduate teaching program. “We had a very strong proposal,” Parsons said about the combined efforts of SDSU and the U of Minnesota.

Once an advisory board for the center is organized, the two universities will divide responsibilities for research based on the equipment and background of the staff at each college, Parsons said. He said the research money is expected to be given to SDSU by January 1, 1988. It

will support ongoing research within each university.

Parsons, director of the SDSU branch, and four other SDSU faculty members will be conducting the research including: Dr. R.J. Baer, Dr. V.V. Mistry, Dr. G.S. Torrey and Shirley Seas.

Parsons said he expects some of the areas to be studied to include concentrating milk before cheese making, new

starter cultures for cheese making, ice cream and frozen dessert sweetening agents and treatment of raw milk with carbon dioxide to prevent spoilage.

Money from the research program cannot be used to support faculty salaries, Parsons said. However, technicians, undergraduate, graduate and post-doctorate students may be added to assist with the research.

New Faculty Member

The Dairy Science Department welcomed a new member to its faculty staff in October 1986, Dr. Vikram Mistry. Dr. Mistry is a native of Ahmedabad, India and has filled in the vacancy created by the retirement of Dr. Ken Spurgeon.

Dr. Mistry attended primary and high school in Nairobi, Kenya, where he resided with his family until 1975. In 1975 he returned to India and enrolled as a Dairy Technology major at the Gujarat Agricultural University in Anand, India. He received his Bachelors degree in 1979 and in Fall 1979 was accepted as a graduate student by the Department of Food Science at Cornell University in Ithaca, New York.

He received his Masters degree with a major in dairy science and a minor in microbiology in January 1982 and his Ph.D. in June 1986, with a major in dairy science and minors in microbiology and chemical engineering. Upon receiving his Ph.D. he accepted a Post Doctorate position, also at Cornell University, and continued in that capacity until September 1986.

On October 1, 1986, Dr. Mistry joined the Dairy Science faculty at SDSU, with 70 percent research and 30 percent



Dr. Vikram Mistry

teaching duties. He will be teaching Technical Control of Dairy Products I every fall and parts of Dairy Products Processing I and II in Fall and Spring of alternate years. His research emphasis will be on ultrafiltration and cheese technology. He commented that he accepted the position at SDSU because of the Dairy Science Department’s excellent reputation and past accomplishments.

Dr. Mistry, his wife Harsha and newly arrived baby girl (Abha) presently reside in Brookings. The Dairy Department is extremely happy to have Dr. Mistry here and wishes him the best of luck at SDSU.

Right: A blast from the past – Mistry is featured as a new faculty member in the 1987 issue of the SDSU Dairy Digest.

Bottom: Mistry assists a student member of the SDSU Dairy Club prepare cheese boxes for their annual fundraiser.

Similarly, his passion for students and helping them grow into prepared young professionals was evident through his dedication to excellence and developing personal relationships with every student that crossed his path.

“Dr. Mistry had a huge impact on my career path,” said Joey Otta, 2023 dairy manufacturing graduate and current production supervisor trainee at Saputo Inc. in Sulphur Springs, Texas. “He called me personally before I graduated high school to confirm my major and get to know me, which made me feel so welcomed. The first day of class, he wrote all 22 students’ names on the whiteboard and went around the room introducing every one of us to the class. He knew our hometowns, the sports we played, activities we were in and any alumni in our families that attended SDSU for dairy or food science.”

Like Otta, it is very common for other students to have similar experiences with Mistry and share comments about the impact he had on them during and after their time at SDSU.

“He was eager to help us himself, or find someone to help us, with any questions or concerns we had,” said Otta. “Along with that, Dr. Mistry is the best listener I know. When you talk to him, he makes you feel like you’re the most important person in the world – in my eyes, he is irreplaceable.”

Just as important as teaching was to Mistry, he spent many years of his career conducting research on low-fat and full-fat cheddar cheese, the development of high protein powder and its applications, applications of membrane technology in cheese manufacture, bifidobacteria in dairy products, microstructure of products, chemical analysis of milk and milk products and process cheese technology.

In total, he advised and mentored 18 graduate students and two post doctorate associates throughout his years in the Department of Dairy and Food Science.

“Dr. Mistry was able to see my potential and encouraged me to accomplish things that I had no idea I was capable of doing,” said Lloyd Metzger, 1992 dairy manufacturing alum, former Alfred Dairy Science Chair at SDSU and current vice president of quality and technology at Valley Queen Cheese.

As Metzger’s undergraduate and graduate advisor, and later as his colleague, Mistry and Metzger worked on numerous research projects together over the years.

“He has the unique ability to ask thought provoking questions that caused me to search for answers and encouraged independent learning,” said Metzger. “This mentoring was instrumental in

developing my problem-solving skills and built a foundation for future success. He encouraged me to attend Cornell University for my doctorate degree and was the one to encourage me to apply for the Alfred Chair in Dairy Science position at SDSU in 2007.”

Mistry’s awards and professional honors include the 1995 Research Award of the SDSU Chapter of Gamma Sigma Delta, 1996 Research Award of the SDSU Chapter of Sigma Xi, 2003 F.O. Butler Foundation Faculty Award for Excellence in Research at SDSU, 2004 American Dairy Science Association (ADSA) Kraft Foods Teaching Award in Dairy Science, 2004 ADSA International Dairy Foods Association Award for Dairy Processing Research, 2011 Dr. Harold and Barbara Bailey Award for Excellence in Academic Department Leadership at SDSU, 2012 South Dakota Dairy Producers Friend of the Dairy Industry Award and was a 2023 Minnesota FFA Honorary State Degree recipient. Additionally, he served as a reviewer for the Journal of Dairy Science, International Dairy Journal and Le Lait, the French Journal of Dairy Science and Technology.

His professional memberships include the American Dairy Science Association, Institute of Food Technologists and the National Dairy Shrine.

When asked if he could sum up his career at SDSU in one word, Mistry’s answer was “inspiring.”

He explained “The Department of Dairy and Food Science at SDSU gave me an opportunity to grow in my area of expertise in dairy science. The invitation to serve as Associate Dean and Director of Academic Programs provided me an opportunity to serve and understand agriculture and natural resources as a whole. These experiences also gave me the opportunity to observe human potential in the form of student development from when they started as freshmen and now as they are deep into their careers leading in their chosen fields. This power of human potential and impactful industry has been truly inspiring.”

As he begins his retirement, Mistry says he is looking forward to enjoying the family side of life, traveling and watching the developing careers of the students he had the privilege of becoming acquainted with.

“I am very grateful to SDSU for providing me the opportunity to grow professionally and personally, while being able to contribute to the dairy industry and the professional development of others,” said Mistry. “I am extremely thankful to my colleagues, mentors and students who helped make my time at SDSU so rewarding and meaningful.”



“I am very grateful to SDSU for providing me the opportunity to grow professionally and personally, while being able to contribute to the dairy industry and the professional development of others. I am extremely thankful to my colleagues, mentors and students who helped make my time at SDSU so rewarding and meaningful.”

- Vikram Mistry

DR. BILL GIBBONS

RETIRES AFTER 36 YEARS OF DEDICATED SERVICE TO SOUTH DAKOTA STATE UNIVERSITY

BY NICOLE HUDSON



Bill Gibbons, director of the South Dakota Agricultural Experiment Station at South Dakota State University and Associate Dean of research for the College of Agriculture, Food and Environmental Sciences, retired in June 2023 after 36 years of dedicated service to the university.

Gibbons held the roles of director of the South Dakota Agricultural Experiment Station at South Dakota State University and the associate dean of research for the College of Agriculture, Food and Environmental Sciences since January of 2020 and had previously served in these roles as interim since 2016.

In his roles, Gibbons coordinated and facilitated research in the College of Agriculture, Food and Environmental Sciences and the college's network of research farms and stations with over 17,000 acres of land across the state that make up the South Dakota Agricultural Experiment Station.

"I want to congratulate Dr. Gibbons on a highly successful 36-year career in service to South Dakota State University," said Joseph Cassady, South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences. "His contributions to science and education will be felt by SDSU for decades to come."

An alumnus of South Dakota state university, Gibbons earned multiple degrees - bachelor's degrees in biology, microbiology and chemistry; a master's degree in microbiology; and doctoral degrees in agronomy and microbiology.

Gibbons joined the Department of Biology and Microbiology as an assistant professor in 1987 and attained the rank of professor in 1997. He was named a distinguished professor in 2018. In his role as a professor, Gibbons taught a biotechnology course and advised graduate students and undergraduate researchers.

He has trained over 20 master's students, three doctoral students and countless undergraduate students, most of which have gone on to work in the biotechnology industry.

Gibbons had a highly accomplished research career at SDSU. His work focused on applied microbiology and biotechnology, specifically in value addition to agricultural products through bioprocessing. He helped develop a high-protein aqua feed ingredient from soybean meal that is now being commercially manufactured and providing aquaculture farmers and feed manufacturers around the world with the power needed to boost the rapidly growing industry's performance. As a graduate student, Gibbons participated in one of the most impactful projects ever conducted at SDSU, the groundbreaking ethanol fuel research and development project that began in 1977. Since then, the ethanol technology developed at SDSU has grown and spread across the country.

"Dr. Gibbons provided an effective firsthand example of the potential to spinoff university research results into creating opportunities for economic growth and employment," said Daniel Scholl, Vice President of Research and Economic Development. "While serving as leader of the South Dakota AES and during the time he filled the additional duties of interim Assistant Vice President for Technology Transfer, he was a valuable coach and mentor for faculty and graduate students who saw the potential for their creative research to impact the marketplace.

He knows how to inform research with questions that are important to the marketplace, navigate publication and confidentiality needs, and work effectively as both a researcher and as an entrepreneur. I am grateful to have had the opportunity to work with him and learn from him."

Gibbons practiced and promoted

interdisciplinary research for many years and had a strong network of collaborators from process and chemical engineers to biochemists and molecular biologists.

"Dr. William Gibbons has made major contributions to bioprocessing education through teaching and mentoring numerous undergraduate and graduate students," said Kasiviswanathan Muthukumarappan, Klingbeil Endowed Department Head and Distinguished Professor of Agricultural and Biosystems Engineering. "He provided leadership and was a collaboration king in developing a Center for Excellence in Bioprocessing in South Dakota. Dr. Gibbons provided leadership in scholarship activities and his collaborative contributions are enormous with many invention disclosures, patents applied, patents awarded and one license agreement in the development of aquaculture diets."

During his career, Gibbons has published more than 120 refereed publications and more than 340 presentations in bioprocessing.

His honors include being named a Distinguished Professor by SDSU in 2018, a National Wetlands Award winner by the Environmental Law Institute in 2018, an F.O. Butler Award for Excellence in Research by SDSU in 2014, the Pat and Jo Cannon Intellectual Property Commercialization Award in 2011, Gamma Sigma Delta Researcher of the Year in 2011, College of Agriculture and Biological Sciences Distinguished Researcher of the Year in 2007 and SDSU Microbiology Club Teacher of the Year in 1990.

During this transition, Russ Daly, Professor, SDSU Extension Veterinarian and State Public Health Veterinarian, will be serving as interim director of the South Dakota Agricultural Experiment Station and Associate Dean of Research for the College of Agriculture, Food and Environmental Sciences.

NICHOLAS UILK

KLINGBEIL ENDOWED EDUCATOR IN PRECISION AGRICULTURE

BY ANDREA HAMMER

Nicholas Uilk was recently named the inaugural Klingbeil Endowed Educator in Precision Agriculture at South Dakota State University.

Shortly after graduating from SDSU with his bachelor's degree in agricultural systems technology in May of 2008, Uilk completed his Master of Education degree in August of 2011. He began his teaching career at SDSU in January of 2009 as an instructor in the Department of Agricultural and Biosystems Engineering, a position in which he served until he later became a lecturer in 2021 before being named to his newly endowed role.

"We are honored and humbled to name Mr. Nicholas Uilk as our Klingbeil Endowed Educator in Precision Agriculture," said Kasiviswanathan Muthukumarappan, Maynard A. Klingbeil Endowed Department Head and Distinguished Professor of Agricultural and Biosystems Engineering. "With his many years of farming background and nearly 15 years of teaching experience in the department, Nic is well positioned and prepared to lead our precision agriculture program into the future."

Over the past 14 years, Uilk has taught various agricultural systems technology and precision agriculture classes covering topics such as construction techniques and materials, microcomputer applications in agriculture, industrial and outdoor power, farm machinery systems management and emerging technologies in agriculture. Additionally, he has designed, developed and implemented two new courses – chemical applications in agriculture and the introduction to precision agriculture class and lab.

As an endowed educator, Uilk will be responsible for encouraging further excellence in student recruitment, teaching, academic advising and student retention specific to the precision agriculture program.

"I am very honored to receive the Klingbeil endowment," said Uilk. "It will be used to help provide an educational experience for our students unmatched by any other university in the nation."

Outside of teaching classes, Uilk serves as the faculty advisor for the Jacks Agricultural Technology and Engineering Club (JATEC) and advises more than 80 agricultural systems technology students. He also spends time developing curriculum to meet current industry and student demands and is a member of the Department of Agricultural and Biosystems Engineering Advisory Council.





“Agriculture is an ever-changing and evolving industry, and technology plays a very important role in the future of production agriculture practices.”



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. He is especially proud of the impactful hands-on learning experiences he has provided to students by utilizing Kubota utility vehicles that are fully equipped with Raven precision agriculture equipment.

“Agriculture is an ever-changing and evolving industry, and technology plays a very important role in the future of production agriculture practices,” said Uilk. “Our goal in the precision agriculture program is to provide students with hands-on opportunities to support the content they are learning in our classrooms and labs, allowing them to apply the theories to the real world. I like to say, ‘you didn’t learn how to ride a bike by reading the owner’s manual!’”

He has also made it a top priority to create opportunities for undergraduate and graduate students to connect and build meaningful relationships with industry professionals. Specifically, Uilk has enjoyed contributing to the Precision Connect student-industry networking event that has resulted in higher placement rates for students enrolled in internship programs across several diversified degree areas. In late September, the annual event will bring together nearly 200 students and industry partners for its third year.

Uilk’s most 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 PrecisionAg® 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.

His professional memberships include Gamma Sigma Delta and the American Society of Agricultural and Biological Engineers.

In his new role, Uilk looks forward to continuing to work alongside other faculty members to increase the number of hands-on activities and grow learning-based education within the precision agriculture program.

“I am excited for the opportunity to drive progress in precision agriculture through our undergraduate program and prepare the students who will go on to be leaders in the agricultural industry,” said Uilk.



SDSU STUDENTS STUDY



ABROAD

South Dakota State University offers students a variety of study abroad opportunities.

This spring, students in the College of Agriculture, Food and Environmental Sciences traveled to **Vietnam** and **Cambodia, South Africa, and New Zealand** to learn more about international agriculture.

BY KENNEDY TESCH, NICOLE HUDSON & TESSA ERDMANN

SOUTH AFRICA

A group of SDSU students spent their spring break studying abroad in South Africa March 10-20. The group was made up of students representing a wide variety of academic programs across campus such as animal science, agricultural science, biotechnology, agricultural communications and nursing.

The 14 students in the class included Sydney Sheffield, Emily Gerber, Bailee Anderson, Emilee Schuetz, Erin Schelling, Megan Sievers, Allisyn Baker, Haley Maday, Taylor Stout, Prairie Retzer, Braden Waldbeser, Mackenzie Henning, Reagan Sevigny and Garrett Bailey. The class was led by Michael Gonda, professor in the Department of Animal Science, and assisted by Bob Thaler, Distinguished Professor and SDSU Extension Swine Specialist, and Natalie Hoyes, former academic advisor in the Department of Animal Science.

“Students learned firsthand about agricultural practices as well as the culture and history of South Africa,” said Gonda. “The entire group learned about the differences of the country compared to the United States and learned about problems facing South African agriculture

and society. Students also gained more confidence in their ability to travel internationally and interact with people of different cultures and backgrounds.”

The class focused on a combination of different topics such as agriculture, healthcare, culture and history. The students spent time with faculty and graduate students from the National Animal Research Center near Pretoria, South Africa, and spent several days on a local medical doctor’s farm where they learned about crop farming, cattle production and the raising of wild game.

As part of their experience, the students assisted in tranquilizing a nyala antelope, treating it and moving it to a different pasture. The class also had the opportunity to work with Afrikaner cattle and study different agronomy methods. After learning about some of the different farming practices, the group then met with emerging farmers. Additionally, they visited the Apartheid Museum, Voortrekker’s Monument, the Cheetah Rescue Center, a native village and a national wildlife park where the students could closely observe elephants, giraffes, zebras, hippos and many other wildlife species.

“My favorite part of the class was the time we spent at Trektop Safaries which was a game reserve that we stayed at for about half of our trip,” said Mackenzie Henning, a sophomore biotechnology and agricultural science student from Jackson, Minnesota. “The Trektop staff shared a lot about their own experiences in South Africa, which was very interesting. They also spent time showing us their livestock and crop operations and took us along with them while they immobilized and relocated some game animals.”

Students are encouraged to take advantage of educational opportunities abroad throughout their time at SDSU to step out of their comfort zone and improve and expand their worldview.

“Dr. Gonda did a great job of leading the class, and I would encourage students to consider it in the future,” said Thaler. “Students need to understand that this is the best time of their lives to go abroad. This trip, and all international travel through CAFES, is life changing – it could be many years before they have an opportunity for an experience like this again.”



VIETNAM & CAMBODIA

This spring, students from the College of Agriculture, Food and Environmental Sciences and the Van D. & Barbara B. Fishback Honors College studied abroad on a 10-day trip to Vietnam and Cambodia.

The 28 students on the trip were Isaac Berg, Rylan Willis, Emilee Owen, Cheylub Schmitt, Karmen Sperr, Jada Plastow, Jacobi Krouse, Kelsey Dahme, Zach Zuber, Tessa Holien, Lainna Duncan, Jordan Horejsi, Ella Kreber, Merissa Cartwright, William Kessler, Lily Geffre, Logan Helgoth, Briana Middendorf, Jess Hewitt, Baylee Beaner, Sydnee Hubner, Hannah Bates, Sydney Jensen, Emily Matejka, Kylie Rosenau, Chyenne Blackwell, Kaitlyn Mohnen, and Thomas LaFave. The trip was led by Bob Thaler, Distinguished Professor and SDSU Extension Swine Specialist, Sharon Clay, Distinguished Professor, and Nate Bylander, Coordinator for Programs, Events and Promotions for the Van D. & Barbara B. Fishback Honors College.

The group began their trip with a visit to the United States Embassy located in Hanoi, Vietnam. At the embassy, the students heard from a panel consisting of an Embassy spokesperson, the Head of Foreign Agricultural Services for Vietnam, and two Fulbright representatives. Students then visited the Vietnam University of Agriculture (VNUA) where they were able to converse with students from Vietnam. VNUA students lead SDSU students on tours of the campus and the visit ended

with a banquet where faculty and students from both universities enjoyed a meal together.

While in Vietnam and Cambodia, the students experienced several types of agricultural industries. The group toured an operation where they learned about weasel, porcupine and woodchuck production and marketing. The group also toured a hydroponic farm that grows lettuce and cucumbers using flood tables that utilize recycled water for conservation purposes. Additional visits included a duck farm, honey farm, white and pink tilapia farm, and a rubber plantation.

Students say one of the most memorable experiences of the trip was the Sapa region of Vietnam which is known for its terraced rice fields. The group hiked through the valley of rice farms, which have been passed down through generations for centuries. Students were granted the opportunity to help a local farmer plant rice. "Most of us kicked off our shoes and socks, and immediately jumped into the rice paddy to help plant rice for the local farmer," said Emily Matejka, a senior agricultural communications student from Sherburn, MN. "It was so immersive to be able to be a part of the culture and landscape, not only through admiration, but through the chance to plant rice in that historic place."

In addition to the agricultural practices of the area, students learned about the

textile industry in Vietnam and Cambodia, one of the largest industries in these countries. Students toured a silk factory where they were able to see employees spin and weave silk from the cocoons of silkworms. Students also toured Artisans Angkor where they were able to see silkworm farming, fabric dyeing and weaving and more.

The trip provided several opportunities to learn about Vietnamese and Cambodian culture and history. Students made traditional paper horses that are used as burnt offerings to ancestors and attended a water puppet show, a Vietnamese folk-art form that has been popular for centuries.

While in Cambodia, the group toured several Buddhist temples including Angkor Wat, Ta Prohm and Angkor Tom, which is the largest temple complex in the world. While touring these temples, students learned about the construction and centuries of history tied to the temples.

"I think it is so crucial that everyone has some sort of international experience in their life to fully understand and appreciate a different culture from our own," said Matejka. "We have so much to learn from one another, and it is beautiful to be a part of another culture for even a short amount of time. The diversity of food, agriculture, history, and landscapes are truly a wonder to discover, and I can't wait to take even more opportunities to continue exploring our vast and beautiful world."



NEW ZEALAND

Seventeen SDSU students in the College of Agriculture, Food and Environmental Sciences recently gained hands-on experience and an in-depth understanding about agriculture in the southern hemisphere during a 16-day study abroad trip to New Zealand.

Julie Walker, Animal Science Professor and SDSU Extension Beef Specialist, and Matthew Diersen, Griffith Chair in Agricultural Finance and SDSU Extension Risk and Business Management Specialist, taught the course and led the travel experience.

After arriving in Auckland, New Zealand on May 9, the group spent time meeting with farmers, learning more about the island nation's culture, and touring key sites that would allow them to experience and evaluate the country's diverse food and agricultural systems.

Some tour stops are described as follows:

On May 12, the group visited the Redwood Forest. The forest allowed the group to learn about how Europeans introduced redwood trees into New Zealand in the early 20th century.

On May 14, the students departed for one of the more unique experiences on their trip. Students visited about the agricultural industry, government, and saw

host family operations firsthand.

On May 16, the group headed to Tawhai Gotland Stud, located outside Hawarden, New Zealand. Their visit was focused on the farmer's sheep operation consisting of about 1,200 breeding ewes. They gained more information about sheep breeds such as the Gotland sheep that have unique herding behaviors.

On May 18, the group headed to Zero Forest Lodge. This small cherry orchard is one of the first commercial farms to become entirely free from fossil fuels. Students observed how electric tractors and equipment are used to complete the work by harvesting the energy through solar panels. This stop focused on educating the students about electricity on the farm and how it can be used to reduce fuel emissions and save money.

"I really enjoyed visiting this orchard and learning about all the ways they have implemented to reduce carbon emissions," said Abigail Shumaker, a senior agricultural business major from Tipton, Iowa. "It was cool to see how the orchard can reduce carbon emissions and still be profitable!"

On May 19, the group headed to their next destination. According to Walker, Doubtful Sound allowed students to see the beautiful nature of New Zealand.

This stop included a three-hour boat ride learning about the creation of New Zealand's landscape and enjoying birds, waters, and wildlife.

"The scenery on this boat ride simply cannot be put into words," said Kylie Shaw, a senior animal science pre-veterinary student from White Owl, South Dakota.

Walker says the trip is designed to provide as many opportunities as possible during the time abroad. "Many students have not experienced much beyond the Midwest and have limited time and funds to complete a six-month or full-year study abroad program," said Walker. "This shorter study abroad experience allows students to travel to another country, experience their culture, and learn about their agriculture."

"Witnessing the students' excitement when we came across new terrain, different livestock species, pastures, and the people they met was very inspiring to me as a faculty member," said Diersen.

Students that attend the trip included Mackenzie Burgin, Allan Chute, Katy Davis, Makenzie Duncan, Brook Geiken, Lily Green, Grant Hamilton, Grace Kock, Tasha Macholan, Aubrina Melville, Brennen O'Reilly, Matthew Pettis, Kallista Roers, Kylie Shaw, Abbi Shumaker, Wesley Siira and Serena White.



CAFES FACULTY

CLAIM NATIONAL PROFESSIONAL AWARDS

BY TESSA ERDMANN

South Dakota State University has outstanding students and faculty members that go above and beyond in their respective fields within the agricultural industry to make a difference. This year, four College of Agriculture, Food and Environmental Sciences faculty members have been recognized by national professional associations for excellence in their areas of expertise.

DR. BOB THALER

AMERICAN SOCIETY OF ANIMAL SCIENCE FELLOW – EXTENSION

Bob Thaler was inducted as a 2023 American Society of Animal Science Fellow in the Extension category for his dedication and commitment to the swine industry.

Thaler has served the South Dakota State University Department of Animal Science since 1988 as the SDSU Extension Swine Specialist. In 1996, he started teaching and conducting applied research focused on his Extension component. Throughout the years, Thaler has held various leadership roles at SDSU, including serving as the Head of the Department of Animal Science both on a permanent and interim basis, and as the SDSU Extension Agricultural and Natural Resources Program Leader.

Thaler's passion lies in serving local, regional, national, and international pig farmers through his SDSU Extension Swine Specialist role. Thaler helped secure funding from swine industry leadership and allied industry partners to build the SDSU Swine Education and Research Facility and other swine industry-related research projects through his leadership.

"This award is just one recognition of Dr. Thaler's accomplishments for over 30 years of dedicated service to SDSU,

the swine industry, and the American Society of Animal Science," said South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences, Joseph Cassady.

The American Society of Animal Science Fellow Award in Extension is awarded to individuals who have rendered distinguished service to the animal industry and the American Society of Animal Science and had continuous membership in the Society for a minimum of 25 years.

"It is extremely humbling because Extension is a team effort," said Thaler. "I have been blessed to have been able to work with exceptional people. When I started at SDSU, I got to work with legends like Drs. John Thomson and Gene Murra, great county agents including Steve Sutura and Jim Krantz and throughout my career with Dr. Steve Pohl and Drs. Mike Brumm and Don Levis from the University of Nebraska-Lincoln. As my career winds down, I still get to work with great people like Dr. John McMaine, Anthony Bly, Sara Bauder, and Dr. Russ Daly, I have had tremendous support throughout the years from the South Dakota Pork Producers Council and allied industry partners. The success of our SDSU Extension program is really due to all these people working together for the common good of helping pork producers."

The award was presented to Thaler at the 2023 American Society of Animal Science annual meeting in Albuquerque, New Mexico.

DR. ROSIE NOLD

NORTH AMERICAN COLLEGES AND TEACHERS OF AGRICULTURE EDUCATOR AWARD

Rosie Nold, Assistant Department Head of the Department of Animal Science and Professor has been recognized for her dedication to teaching by being selected as one of 21 individuals to receive the North American Colleges and Teachers of Agriculture (NACTA) Educator Award.

Nold has always had a passion for teaching and has done extensive research on the teaching side of her career. She recently completed a project looking into honors curriculum within post-secondary agricultural education and teaching in larger class sizes. Along with teaching, she served as one of the 100th Little International advisors and plans to serve in the same role for the coming 101st Little International.

"Not every professor has a knack for teaching large lecture-style classes as well as hands-on laboratory sections," said Rebecca Bott Knutson, SDSU Van D. and Barbara B. Fishback Honors College Dean and Professor. "Dr. Nold's dedication to establishing SDSU

as the premiere choice for undergraduate education extends well beyond her home department and reaches the university. Dr. Nold is the educator whom we should all aspire to resemble."

Nold's involvement continues beyond the campus of SDSU. Through the NACTA organization, Nold has served as a reviewer for the journal's scholarly articles and has several published journal articles of her own in that publication.

NACTA aims to recognize those whose efforts represent the best in agricultural higher education. The organization seeks to inspire all to achieve higher levels of excellence while encouraging colleagues to share their methods of achieving greatness with others. The organization spans multiple disciplines of agriculture, recognizing faculty from two- and four-year programs. The Educator Award is based on engagement with students and impact. It also recognizes individuals for their involvement in scholarship and within the organization itself.

"It is humbling to be nominated by my colleagues and recognized at a national level across all disciplines," said Nold. "I will strive to continue to provide the teaching and services that exemplify this award."

Top right: From left to right: Thaler, Nold, Cassady, Brennan.



DR. JOSEPH CASSADY

**AMERICAN SOCIETY OF ANIMAL SCIENCE FELLOW –
ADMINISTRATION**

With 30 years of involvement in the American Society of Animal Science, Joseph Cassady was recently inducted as a 2023 Administrative Fellow.

Before his time at SDSU, he spent 12 years on the North Carolina State University faculty. He served as the Head of the SDSU Department of Animal Science from 2013 until his appointment as South Dakota Corn Endowed Dean of the College of Agriculture, Food and Environmental Sciences in 2022. During his time as the Head of the Department of Animal Science, he also concurrently served as the Interim Dairy and Food Science Department Head from 2020 to 2022. In 2019 he was presented with the Harold and Barbara Bailey Award for Excellence in Academic Department Leadership, the highest honor awarded by SDSU for departmental leadership.

“Dr. Cassady has had a tremendous impact on the department and college, as well as the livestock industries across the state and nation, said Professor and Assistant Head of the Department of Animal Science, Rosie Nold. “He is respected by faculty, staff, students, and stakeholders as he continually works to provide and improve on a “culture of excellence” in the university and the livestock industries. He deserves this honor from the American Society of Animal Science.”

DR. JAMESON R. BRENNAN

**WESTERN SECTION AMERICAN SOCIETY OF ANIMAL SCIENCE
YOUNG SCIENTIST**

Jameson R. Brennan was recently awarded the Young Scientist Award from the Western Section of Animal Science through the American Society of Animal Science. Based at the West River Research and Extension center in Rapid City, South Dakota, Brennan has been an assistant professor in animal science at SDSU since 2021.

Brennan’s research focuses on the intersection of rangeland and grazing management, data analytics, and precision technology. His research concentrates on grazing beef systems on western rangelands.

He earned his B.S. at Colorado State University in wildlife biology and, in 2014, was hired by SDSU as a research project manager, which helped him work toward obtaining his Ph.D. in range science.

Through his current role, he has been a strong leader in precision range and grazing livestock management. In the short time he has served as an assistant professor, Brennan has worked hard developing and applying precision technology to collect, curate and analyze unprecedented research data from range beef cattle systems.

The American Society of Animal Science Fellow Award in Administration is awarded to individuals who have rendered distinguished service to the animal industry and the American Society of Animal Science and had continuous membership in the Society for a minimum of 25 years.

Cassady has been a member of the American Society of Animal Science since he was a graduate student. He served on the ASAS Board of Directors from 2015 to 2018, was a member of the ASAS Midwest Section Animal Breeding and Genetics Committee and served on the editorial board for the Journal of Animal Science from 2003 to 2006.

“Dr. Joe Cassady was well respected during his time on faculty at North Carolina State University, and he voluntarily took on leadership roles despite his heavy teaching and research appointment,” said North Carolina State University Alumni Distinguished Professor and Director of Undergraduate Programs for Transfer Students, Jeannette Moore. “Dr. Cassady recognized the importance of mentoring graduate students and new faculty and helped them develop as professionals. It is apparent that he continued to be an outstanding leader when he left to become Department Head and later Dean at South Dakota State University.”

“I am extremely humbled and appreciative of Dr. Jennette Moore and Dr. Rosie Nold for compiling my nomination package,” Cassady said.

The award was presented to Cassady at the 2023 American Society of Animal Science annual meeting in Albuquerque, New Mexico.

He feels the ASAS has been a tremendous help with this project. He has used his connections within ASAS to work and collaborate with ASAS Western Section members to create these tools to better study precision livestock data more efficiently.

“Dr. Brennan is an outstanding researcher who is quickly gaining the attention of many for his innovative work,” said Assistant Dean of West River Operations and Director of SDSU West River Research and Extension, Kristi Cammack. “I nominated Dr. Brennan for this award because of his highly successful research program and his dedication to range livestock producers. Dr. Brennan ensures that his research will ultimately positively impact the livestock and land they rely on.”

To be selected for this award, the nominee must be a member of the Western Section of ASAS and may not be more than 40 years of age when nominated, should be actively engaged in basic or applied research in any of the various areas of animal agriculture, and the research activities of the nominee are evaluated on the contributions to greater efficiency or quality of livestock production or utilization.

“It is a tremendous honor to be recognized by your colleagues for your work,” said Brennan.

The award was presented to Brennan at the 2023 American Society of Animal Science annual meeting in Albuquerque, New Mexico.



Sanne de Bruijn

GRABS GLOBAL OPPORTUNITIES

THANKS TO SDSU DAIRY AND FOOD SCIENCE TRAINING

BY TESSA ERDMANN

Dairy industry opportunities have kept South Dakota State University Dairy and Food Science alumna Sanne de Bruijn on the move. That trend has continued with opportunities opening up for the 2020 graduate to continue learning on a global scale. Growing up, de Bruijn and her family frequently moved from the Netherlands, where she was born, to New Zealand and the United States as they operated successful dairy enterprises. She currently resides in Normandy, France, and serves as a milk quality procurement engineer for Lactalis. She is quick to point out that throughout her life, dairy cattle have served as one of the main constants at every new home along the way.

Her parents, Bert and Annette de Bruijn were involved in the production side of the dairy industry, which is originally where her passion for the industry sparked. Growing up moving around the world taught de Bruijn much about life, travel, and dairy cattle.

“My parents have had a big influence on my career in the dairy industry,” said de Bruijn. They always included me in the farm’s activities and the family business.”

Her family’s commitment to the dairy industry helped her find her connections at SDSU, where she studied dairy production and dairy manufacturing with a minor in food safety. De Bruijn knew quite a bit about the production side of the industry,

but she was fascinated by the process of when the milk leaves the farm. She wanted to know more, so she took up the dairy manufacturing major.

de Bruijn learned about the Department of Dairy and Food Science from former David A. Thompson Endowed Department Head of the Department of Dairy and Food Science, Vikram Mistry, who reached out to encourage her to consider the Department of Dairy and Food Science. After a visit to campus, she was hooked, and an ongoing mentorship with Mistry flourished.

After de Bruijn knew she was planning to attend SDSU, she reached out to Mistry for advice and guidance about her major and the different opportunities that SDSU

could offer. Those few emails back and forth, and Mistry's welcoming guidance, gave her a familiar face on campus and turned into a mentorship.

de Bruijn also loved the hands-on experiences SDSU allowed its students. She noted that faculty combined the theory and the practical side of the dairy and food science fields to help make learning come full circle. She says not only did she love the Department of Dairy and Food Science, but she also loved the people. Coming from further away, she came to Brookings knowing very few people. However, people like Mistry made SDSU feel more like home.

"Sanne is an outstanding professional with a deep passion for the dairy industry and is very knowledgeable," said Mistry. "She was an excellent mentor to younger students, and she is a strong ambassador for the Dairy and Food Science Department, the College of Agriculture, Food and Environmental Sciences, and SDSU."

SDSU Provides Connections and Firm Foundation

Throughout her years at SDSU, de Bruijn became heavily involved on campus, participating in everything dairy-related and more – Dairy Cattle Judging, the Intercollegiate Dairy Challenge team, Dairy Products Judging, Dairy Club, Agriculture Future of America, served as a South Dakota Dairy Ambassador, and served as a CAFES Ambassador. She also was Mistry's teaching assistant for the First Year Dairy Seminar class, where she was able to help lead a mentorship program for the students. Being involved is something that de Bruijn valued throughout her time at SDSU.

"It is not what you know; it is who you know," is a statement I believe to be true," said de Bruijn. "Getting involved in campus activities will allow you to grow and expand your network. The people you get to know during your time at SDSU will change your entire college experience. These connections will also take you far beyond your time at SDSU. Make those connections. You never know where they will take you."

A highlight of her time at SDSU was being a part of the Dairy Products Judging Team that placed second in the national competition. This win took her to the World Championship Cheese Contest in Madison, Wisconsin, to be one of the cheese judges who evaluated cheeses from around the world. She also loved being a part of the South Dakota Dairy Ambassador team that

allowed her to share her dairy story with consumers and producers in the Midwest.

One thing she appreciated about SDSU was the work faculty put into setting their students up for success. The Department of Dairy and Food Science brings strong, experienced industry representatives in to talk about their careers and what they do within the industry. They also talk about different opportunities that they know their companies offer to students, such as full-time job openings and various internship opportunities.

de Bruijn worked hard to attend as many industry presentations as she could. Through the informational sessions and her connections at SDSU, she learned about each of her summer internship experiences. Like many others, she valued these opportunities and took advantage of them whenever they were given.

Lactalis Connection

One company, Lactalis, comes to SDSU every year to share opportunities for students who are passionate about the dairy industry. They also provide scholarships annually for dairy manufacturing students. Being located in 94 countries, Lactalis has a large footprint in the global dairy industry, making them the largest dairy product group in the world.

The most prestigious program they offer students is their international master's degree program and apprenticeship in dairy engineering. The program is based in France, where students spend half the time in the classroom, working on a thesis and other courses, and the other half of their time as an apprentice in one of the Lactalis factories. After completing the program, students are sent to work for Lactalis for two more years.

de Bruijn was incredibly intrigued by this opportunity and applied for the program. After an extensive interview, she was selected, later learning she was the only participant selected from the United States.

Knowing very little French, and absolutely no one, she moved to France in August 2020 to begin her journey. After a five-month language training period, de Bruijn started the program in January 2021 at Ecole Supérieure des Agricultures (ESA) in Angers, France.

During her first year, she worked in the dairy manufacturing sector. Her first apprenticeship involved working with goat cheese. She then moved on to a milk

collection apprenticeship. The second year of her program was spent in Normandy, where she worked for a factory that produces raw milk camembert cheese, made with unpasteurized cow's milk. Her master's thesis focused on dairy management practices related to the calving period in dairy cows and the relationship with the contamination of raw milk by the harmful pathogen, Salmonella. She visited about 50 dairy farms in the region around Normandy to evaluate any management risks that could potentially contaminate the raw milk supply.

In January of 2023, de Bruijn finished her master's degree. She successfully pursued the milk quality procurement engineer position at the Lactalis factory in Normandy.

During her master's program, she focused on her thesis and the research behind it. Within her new position as a full-time employee, she would work directly with 80 farms to ensure that the milk brought to the factory is safe for the consumer and of high quality. To do this, she interprets microbiological analyses results that are conducted for the milk from each farm to ensure that the milk coming into the factory is free of harmful pathogens such as Escherichia coli, Salmonella, Listeria, and Staphylococcus aureus. If contamination is detected, she visits with the dairy producer and conducts on-farm consulting to put protocols in place to help avoid and control future contamination.

"Our first priority is the safety of our consumer. Because our product is made with raw milk, we cannot pasteurize the milk to eliminate any harmful bacteria," said de Bruijn. "We need to ensure that the milk coming into our factories is free of any bacteria that can be a risk to the safety and security of our consumers."

de Bruijn feels that SDSU set her up for success in her current career. She said, "The connections and opportunities SDSU presents to students makes this university very unique. Although small, as compared to other dairy campuses across the U.S., SDSU is very big on the map. Students from SDSU are wanted in the agriculture industry! I am very thankful to have had the opportunity to attend SDSU and to participate in the various clubs and organizations that make it great. To any future or current student, make the most of your time at SDSU and get involved in the things that get you excited about your future! Now is your time to find your path. And finally, enjoy the ride because it goes by too fast! Go big, go blue!"



SDSU EXTENSION COHORT PROGRAMS

OFFER IMMERSIVE EXPERIENCES FOR EMERGING PRODUCERS, ENTREPRENEURS AND COMMUNITY LEADERS

BY CANDY DENOUDEN

Whether running a legacy business, launching something new or inspiring change in a community, it's important to have a strong support system.

However, networking can be challenging, particularly in rural areas. In addition to providing training on specific topics and skills, SDSU Extension's cohort programs help people overcome challenges to build their support network and develop a deep knowledge base.

The newest SDSU Extension cohort program, Emerging Sheep Producers, started in September 2022. The program meets a need in South Dakota's growing sheep industry, where 50 percent of respondents to a recent survey reported having fewer than 10 years of experience.

"Throughout the United States, we're seeing a lot of newer producers starting," said Kelly Froehlich, assistant professor and SDSU Extension Sheep and Goat Specialist. "This program is designed to give them the hands-on experience and knowledge they need to be successful."

Led by Froehlich and Jaelyn Whaley, SDSU Extension Sheep Field Specialist, the first cohort finished in August 2023 with 17 participants. The year-long program combines in-person workshops, presentations, networking and hands-on training in a mix of in-person and virtual settings.

"There's so much going on in the agricultural industry – you have to know so many different things," said Froehlich. "Having those connections and being able to reach out to other people when you have an issue or need advice is critical." Froehlich said the program fosters networking by taking participants to different farms and ranches across the state, where they meet established producers, hear from industry experts and ask questions.

Froehlich and Whaley said sheep are an attractive option for people with smaller acreages because they require less land and feed than larger livestock, like cattle, and are less expensive to start. Open to people over the age of 18 with 10 or fewer years of experience working in sheep production, participants range from those interested in starting to producers looking to further develop established operations.

Trust takes time

Perhaps the most important element of building a support network is trust.

"The trust piece is really important," said Ken Olson, professor and SDSU Extension Beef Specialist, who helped launch the beefSD cohort in 2010. "Rural people in general tend to be fairly private, so opening up and talking about this kind of stuff except among your closest family

and friends is not something you naturally do."

SDSU Extension Community Vitality Program Manager Kari O'Neill, one of the South Dakota Change Network leaders, agreed. For participants to gain the most benefit, they must be willing to share about themselves and contribute to discussions.

It takes time to build trust, and the cohort system provides that: each SDSU Extension cohort program lasts at least one year. To set the stage early on, O'Neill said the South Dakota Change Network establishes a shared agreement where participants agree to show respect for each other's questions and answers.

The South Dakota Change Network is a year-long cohort study program designed to teach individuals how to make their communities accessible and welcoming for everyone. It is led by a partnership of SDSU Extension, National Arts Strategies Inc., 3E Productions, CommonSense Consulting@Work, and filmmaker Charles "Boots" Kennedy. Participation is free thanks to funding from the Bush Foundation.

Servant leadership and inclusion are foundational principles for the South Dakota Change Network program, from its workshops to its networking. The content emphasizes helping people build their own leadership skills and confidence,

while learning how to be inclusive, how to manage conflict and how to build trust.

“What has been huge is that people bond and get really close to each other in that one-year time span,” O’Neill said.

The program is finalizing the participants for its seventh cohort, which starts in September and averages about 15 participants per group. As more people graduate from the program, it creates pockets of alumni around the state – further enlarging a support network for community leaders.

“It’s really fun to see them gain confidence from each other and work together,” O’Neill said. “As you make bigger changes, it takes that group of people working together in a community.”

Another unique feature of the South Dakota Change Network is its project focus. Participants will have access to a small grant to assist a project they choose, which impacts their organization in positive and significant ways. Previous projects include community murals or youth involvement; Centerville, in the southeastern part of the state, created a welcome program for new employees at the Dakota Plains Dairy Plant. A cancer survivor worked with a health care provider to write a book that includes journal pages for current cancer patients.

The types of projects vary, but O’Neill said they’re all working toward a common goal.

“They’re all about making changes in their communities or organizations that allow the world or their surroundings to be more inclusive of other people’s voices,” O’Neill said.

Another benefit of the one- to two-year time span is that it gives participants time to implement what they’re learning while still part of the program. Emerging Sheep Producers and beefSD also provide one-on-one mentoring for producers. In beefSD, Olson said the mentors work with participants early on to establish clear, achievable goals they can work toward during the cohort.

“Once we understand what their goals are, we can help them overcome whatever challenges or hurdles they’re dealing with to help them meet their goals,” he said.

Being part of a group offers a deep level of accountability, said SDSU Extension Community Vitality Field Specialist Peggy

Schlechter, one of AgritourismSD’s leaders. People commit to attending, and as they build relationships, they don’t want to miss time together.

“That connectedness keeps people coming. Even if they have too much to do, or it’s inconvenient, they figure out a way to make it work,” she said. “They develop some very close relationships. That’s important because as they grow their enterprise, they’ve always got someone to talk to.”

“A learning community is a group of people with common educational goals or needs, and a cohort-based program is a really nice way to facilitate that.”

- Ken Olson

“Agritourism” links the agricultural lifestyle with tourism to attract visitors to a farm or ranch for the purpose of entertainment and/or education while generating additional income for the farm or ranch. That can include everything from hunting lodges to corn mazes to pick-your-own produce spots to educational classes or work experiences.

A two-year cohort supported by a USDA National Institute of Food and Agriculture grant and a partnership with the South Dakota Department of Tourism, AgritourismSD started its second class in May of 2023 and will continue through 2025. The mix of virtual and in-person sessions, combined with site visits and in-depth case studies, allows the participants plenty of time to ask questions.

Learning Communities

Olson worked with a graduate student from Chile who introduced him to their cohort-based programming. The model fit perfectly with SDSU Extension’s efforts to support learning communities, and Olson witnessed first-hand how effective the Chilean program was in developing long-term, trust-based relationships between Extension specialists and producers.

“A learning community is a group of people with common educational goals or needs, and a cohort-based program is a really nice way to facilitate that,” Olson said. “I came away from that thinking, ‘this is a fantastic way to do Extension.’”

He and Stacy Hadrick, SDSU Extension Associate, worked together to launch

beefSD in 2010. Class 6 of beefSD started in the fall of 2022 and has 13 participants. Like Emerging Sheep Producers, participants range from beginners looking to get established to legacy ranchers. The program is supported by grants from the USDA National Institute of Food and Agriculture and registration fees.

A two-year program, beefSD alternates face-to-face and virtual events every other month to maintain continuity and allow program leaders to develop a hearty curriculum.

One of the unique components of the beefSD program is its out-of-state travel opportunities. Olson and Hadrick want beef producers to have a chance to experience different aspects of beef production, not only cow/calf operations.

“We realized most producers only know the part of the industry they’re working in,” Olson said. By touring different cow/calf operations, feedlot operations and packing plants, Olson said it helps beef cattle operators have a more holistic understanding of the industry and the role they play. It also makes it more immersive and interactive for participants.

Another key component of the beefSD program is its case studies, where participants get a close look at an active cattle operation. Typically held over two days, the first day starts with classroom instruction and then moves to a tour of the operation. The next day, the owner or manager of that operation visits with participants and they have two to three hours to ask questions.

“The neat thing about this pattern is they get to look at things, they get to talk about it at dinner, and by the next morning they’ve thought about it quite a bit and they have lots of questions,” Olson said. “We find case studies who are willing to share all of their knowledge.”

Like the other cohort programs, beefSD surveys previous participants to measure impact. Most operations report improved profitability and growth in their operation. Olson said he can go to any part of South Dakota and connect with a friendly face who has participated in the program, and see how it has impacted their operation.

“It’s really rewarding to do this kind of programming because you know exactly what benefit you’ve provided,” Olson said.



SUMMER FIELD DAYS *showcase* SOUTH DAKOTA AGRICULTURAL EXPERIMENT STATION SITES

BY CANDY DENOUDEN

Each summer, the South Dakota Agricultural Experiment Station system showcases the research taking place at its research stations with field days. The days include guided tours of each facility and presentations from researchers and SDSU Extension experts. Producers, industry professionals and members of the general public can see how winter wheat varieties are tested, learn about weed control strategies or take a trip through a high tunnel, for example.

From the wide-open ranges of central South Dakota to the gently sloping farmland east of the Missouri River to the Black Hills in the west, the South Dakota Agricultural Experiment Station sites showcase the diversity of production opportunities across the state.



**SDSU's South Dakota Agricultural Experiment Station system
includes six strategically located sites:**

DAKOTA LAKES RESEARCH FARM
PIERRE

OAK LAKE FIELD STATION
ASTORIA

COTTONWOOD FIELD STATION
PHILIP

SOUTHEAST RESEARCH FARM
BERESFORD

NORTHEAST RESEARCH FARM
SOUTH SHORE

WEST RIVER RESEARCH FARM
STURGIS

The South Dakota Agricultural Experiment Station's research mission is one of the cornerstones of a land grant university. In addition to enhancing the quality of life in South Dakota, the research directly supports the teaching programs offered by the College of Agriculture, Food and Environmental Sciences, the College of Education & Human Sciences, the College of Natural Sciences and the educational programs delivered by SDSU Extension.

Reid Christopherson, executive director of the South Dakota Wheat Commission, said field days are a valuable showcase of the innovative work being done. What he most appreciates is the candid look at what works, what doesn't, and what is coming.

"They tell it like it is," Christopherson said. "As we look at the future of the wheat industry, we are totally committed to soil health and sustainable agriculture. This is kind of where it starts."

Christopherson was one of the attendees of the Dakota Lakes Research Farm Field Day on June 29, along with Pierre-area producer Mark Weinheimer.

Weinheimer, who farms no-till crops including wheat, corn and sunflowers, said he studies the latest research deeply and has been attending the field day since about 1993. The events are valuable to stay up-to-date on best practices.

"I always learn something down here," he said.

At the July 11 field day on the Southeast Research Farm, Beresford-area farmers Terry and Andy Dolan agreed field days are educational – and an enjoyable way to gather with other producers.

"It's a chance to visit with neighbors and to gain knowledge," Terry Dolan said.

2

FIELD DAY

highlights

0

DAKOTA LAKES RESEARCH FARM FIELD DAY JUNE 29



2

SOUTHEAST RESEARCH FARM FIELD DAY JULY 11



3

WEST RIVER RESEARCH FARM FIELD TOUR
JULY 11



NORTHEAST RESEARCH FARM FIELD DAY
JULY 13



COTTONWOOD PRECISION LIVESTOCK FIELD SCHOOL
JULY 31 - AUGUST 2



JACK RABBITS NOW & THEN



Joe Tilstra

Major: Horticulture

Minors: Sustainable Local Foods, Crop Protection, Agronomy, Spanish

Hometown: Rock Rapids, Iowa

Graduation Year: May 2024

Q. What originally brought you to SDSU?

A. There was an instructor that was here when I started that had a big vision for improving our food system to help combat hunger in the state – his ideas and passion for horticulture were what originally convinced me to come to SDSU.

Q. Who inspired you to pursue your career path?

A. The professors here at SDSU have influenced my career path the most. During my freshman year I didn't really know if I wanted to stay in horticulture, but after working at the Local Foods Education Center, I really started to feel like the horticulture industry was where I belonged.

Q. What is your dream job?

A. I want to research hydroponics and other controlled systems in order to improve their sustainability. Ultimately, I hope to be a professor and inspire the next generation.

Q. What is the best part about being a Jackrabbit?

A. I definitely enjoy the small-town feel that you get in Brookings. SDSU has a beautiful campus that doesn't feel overwhelmingly big, classes feel close-knit and everyone is really friendly.

Q. What do you most look forward to about starting your career after earning your degree?

A. Being able to make a difference in our food system is what I look forward to the most. I hope to get my master's degree and maybe even my Ph.D. in controlled environment agriculture, so I am looking forward to having less homework once I finally finish my education.

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

A. I am a member of the Horticulture and Urban Agriculture Club and the Chess Club. Additionally, I have worked with Dr. Ameen in the plant pathology lab and serve as the student manager of the Local Foods Education Center on campus. I also worked on hydroponics projects inside the food pod while it was on campus.

Q. If you could travel anywhere in the world, where would it be and why?

A. I think I would travel to California – I have always wanted to see the Redwood forests. Also, it would be nice to see all of the agriculture that goes on in the state, as well as all the other natural features.

Andy Carlson

Degrees: Agricultural and Biosystems Engineering, B.S., Engineering, M.S.

Years at SDSU: 2002-2007, 2008-2010

Hometown: Erwin, South Dakota

Current City: Brookings, South Dakota



Q. What is your current job title and place of employment?

A. I am in the role of the plant manager at Gevo Net-Zero 1, a company that specializes in developing and commercializing renewable gasoline, jet fuel and diesel fuel. Our aim is to create fuels that have the potential to achieve zero carbon emissions, providing sustainable alternatives and reducing greenhouse gas emissions in the market.

Q. Describe your typical day at work.

A. No day is ever the same and I get to work with cross-functional teams across the entire business. Most of my time is spent in meetings and design review sessions, taking phone calls, analyzing data and generating reports.

Q. What inspired you to pursue your career path?

A. The experience I gained at my part-time job at South Dakota Soybean Processors during my freshman year was most influential in making my decision to pursue the work I am doing now.

Q. How do you like to spend your spare time?

A. Outside of work, I enjoy spending time with my family, running, hunting, fishing and creating different things.

Q. What is a favorite memory from your time at SDSU?

A. There used to be an event called the Great Jackrabbit Race. It was sort of a 24-hour "Amazing Race" type contest but Jackrabbit style!

Q. What has been most rewarding about your career?

A. I have enjoyed helping farmers throughout the Midwest process their commodities into higher value products.

Q. If you could be a penny in anyone's pocket, who would it be and why?

A. Former SDSU Football Coach John Stiegelmeier – it's difficult to be a leader during trying situations and still be so well liked by everyone. Somehow, he pulls it off.

Q. As an alum, why would you encourage young adults to pursue a career in the fields of agriculture, food and environmental sciences?

A. The agricultural community is full of so many great people. Life is enjoyable when working with the "salt of the earth." It may not always feel like it, but agriculture, food and environmental sciences make a tremendous impact on our world.

THE LAND GRANT MISSION

My mother-in-law is a granddaughter of first-generation Norwegian immigrants. As she was growing up in Marshall County, her grandfather, Hans Ole Fagerland, and father, Elmer Fagerland, often said, "I didn't homestead this land for my own prosperity, I homesteaded this land so one day my family could prosper."

In the middle of the Civil War in the summer of 1862, there were two significant acts passed by Congress and signed by President Abraham Lincoln. The Homestead Act of 1862 provided lands to citizens of the United States. The Morrill Act created a mechanism that would generate funds through gifts of federal land, giving access to education in agricultural and mechanical arts.

In 1881, because of the Morrill Act, South Dakota State University became South Dakota's only land grant university. SDSU was built on the hill to the north of Brookings to serve the three distinct missions Congress intended: education, research and extension for the commonwealth. By providing education to the commonwealth, we can solve complex issues with smart, researched solutions. Some argue the Morrill Act of 1862 set the trajectory of the U.S. on an entirely new course.

From the 1860s through the 1890s, because of the Homestead Acts and westward expansion South Dakota's population grew exponentially, reaching over 700,000 at the turn of the century.

The land grant university was where these new landowners could learn best farming practices and share ideas to build the communities we call home.

Today, SDSU continues to carry out the mission we started 142 years ago: access to education and research for all citizens of the region. The Morrill Act was not an investment in the individual, it was an investment in the prosperity of the nation. Today when private donors or public entities invest in classrooms, scholarships and academic leaders, the product is betterment in the collective and the byproduct is benefiting the individual.

I don't know what each of the voting members in the Civil War-era 1862 Congress were thinking, however, it is clear education, innovation and

investment were high priorities. The 1862 Congress made investments knowing they would never personally see the returns, much like the homesteaders Hans Ole and Elmer Fagerland.

Mark Sandager, '11



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