



2018 Impact:

Agriculture & Natural Resources



Our Work

SDSU Extension's Agriculture & Natural Resources (ANR) programs focus primarily on farm sustainability, enhancing access to markets, farm profitability, agricultural leadership development, natural resources and soil health.

Farm Sustainability

Dairy Fest

- More than 2,700 total visitors attended the 2018 Dairy Fest "Got Milk" Gala, Fork-2-Farm youth educational event, Old Tree Farms in Volga, SD, SDSU Davis Dairy Plant, Dairy Carnival at Dairy Fest.
- Dairy Fest Funds raised provided for two \$500 dairy scholarships.

Goals and Impacts:

- Develop the next generation of dairy farmers and industry personnel.
- Provide information on opportunities in this sector and its allied industry.
- Educate consumers on the economic impact of the industry.

Wheat Walks and Crop Performance Trials Tours

- More than 300 people attended four Wheat Walks
- More than 300 people attended six Crop Performance Trial Tours.

Goals and Impacts:

- Increase farmer's knowledge on crop rotations, diversification, and fertilization.
- Helped farmers understand how to manage pests through crops diversity.
- Explain how adding a forage or cover crop after wheat harvest expands their options.
- Add to the farms' bottom-line
- Provide crop diversity to the system
- Protect soil through wheat's valuable residue.

Artificial Insemination Schools

- Four AI schools trained 74 individuals.
- Nearly 200 individuals on waiting list.
- Medium and long-term evaluations to gauge application and economic impacts.

Goals and Impacts:

- Evaluations will measure impacts on reproductive efficiency and profitability.
- Evaluations to strengthen the program and show long-term impacts.
- Improve animal genetics to support the beef herd expansion.

Enhancing Access to Markets

Fourth Annual Dairy Beef Short Course Tour

- 80 participants toured feedlots and a livestock auction facility in Iowa.
- Participants from California, Illinois, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Missouri, Wisconsin, and Canada.
- Feedlot operators, dairymen, calf growers, consultants and advisors, and students

Goals and Impacts:

- Provide information on another source of revenue of dairy operations.
- Attendees managed 100,530 head of cattle
- Economic benefit, 33% indicated a value of more than \$3/head.

Farm Profitability

I-29 Moo University: Winter Workshop Series – From Field to Bunk

- More than 162 dairy producers, students, extension and industry personnel attended
- Represented 28,000 milking cows, 48,000 forage acres, and 31,500 head of beef.
- Five days total in Mandan, Watertown, Pipestone, Orange City, and Norfolk.

Goals and Impacts:

- Update farmers in technology changes and new research findings.
- Attendees surveyed stated they:
 - o Will include cover covers as part of their crop rotation.
 - o They increased their awareness of safety around silage piles.
 - o They will consider Incorporating low lignin alfalfa and BMR corn for silage.
 - o They will follow daily diets delivered to cattle more closely.
 - o They valued the knowledge gained from the workshop at \$3.19/T of forage.

BeefSD Class 3

- A two-year program for beginning producers focusing on all aspects of the beef cattle industry.
- Class 3 had 53 participants from across the state owning and/or managing 14,000 head of cattle.
- Additionally, 20 peer mentors participated in the program providing the key mentoring component.
- Modality: multiple formats including nine face-to-face workshops, four case study ranch tours, two travel study trips, 10 webinars, peer mentor meetings, and post-weaning calf performance.
- This intensive program provides participants tools, knowledge and networking to be successful in an ever changing and progressing industry.

Goals and Impacts:

Participant responses:

- “We have seen \$60,000.00 savings in backgrounding calves each year. Grazing replacement animals instead of feeding them. I would estimate an increase of \$100,000 to our bottom line.”
- “The most significant change would be how we communicate with family in the operation and also our network of people we call on a regular basis to help make better informed decisions.”
- “We have gained a wealth of knowledge and have seen the industry on a large scale”.
- “This has really shown us how much opportunity there is in the beef industry and we hope to take the information we have learned in beefSD to keep moving forward in our operation.”
- “Run forage analysis on all grown and bought feeds to determine the most cost efficient ration.”

Natural Resources

10th Annual Grass-fed Exchange National Conference

- Conducted in Rapid City, South Dakota
- Attendance: more than 500 individuals
- Modality: tours, guest speakers, workshops, and a trade show.
- Partnership between SDSU Extension, SD Grassland Coalition, SD NRCS, and others.

Goals and Impacts:

- To increase the knowledge on the role and potential of grass-fed livestock and pasture-based enterprises in South Dakota.
- More than 500 participants
- It provided a venue to highlight the unsurpassed production potential of South Dakota grasslands. Participants learned about grazing optimization for eco-friendly grassland management.

Agricultural Leadership Development

Dairy Ambassador Program

- Spearheaded by Midwest Dairy in eight states.
- SDSU Extension collaborated with Midwest Dairy to offer opportunity to SDSU students.
- Students received a scholarship of up to \$1,000 and a \$500 travel stipend.

Goals and Impacts:

- Throughout the year, students network with peers and industry experts as well as connect with consumers to share their dairy story.

Soil Health and Environment

Commercial and Private Applicators training for recertification.

- Commercial applicator training conducted at SDSU Extension Regional Centers and 48 county and tribal offices.
- Participants: 3048 applicators and 12 SDSU faculty/staff as trainers.
- Private applicator training served more than 2000 private applicators.

Goals and Impacts:

- Commercial and private applicators require yearly training for recertification.
- Applicators increase their knowledge about cutting-edge agricultural practices.
- Short-term goal: Applicators receive training in the proper application of chemicals.
- Medium-term goal: Applicators modify practices to make them safe, effective, and efficient.
- Long-term goal: Correct application of chemicals reduces environmental impact and increases crop yields.

North American Manure Expo.

- Modality: trade show, manure technology demonstrations and tours, and educational sessions. Hosted by SDSU Extension and partners
- Over 1,400 attendees over the two-day event
- Participants from the US, Canada, England, Belgium, China, the Netherlands, Australia, and New Zealand.

Goals and Impacts:

- Livestock development requires effective incorporation of manure nutrients in the field.
- To provide an opportunity for livestock producers, professional manure applicators, consultants, and others to learn about the latest advances in manure handling and nutrient management.
- The expo stressed SD animal feeding industry and its commitment to environmental stewardship
- The Brookings Convention & Visitors Bureau estimated the Expo generated more than \$322,000 in economic impact on the Brookings area.

Soil Health Events

- Two events conducted in partnership with the SD No Till Association.
- More than 350 farmers attended the workshops.

Goals and Impacts:

- Researchers and the USDA identify soil health as one of the most critical components of successfully sustainable cropping systems.
- Attendees learned practices that reduce soil erosion and improve soil structure
- They also learned how to increase soil organic matter, improve nutrient cycling, improve soil water management, and use plant diversity to reduce weeds, insects and diseases.
- Application of these practices will improve soils making them more resilient and better able to handle weather extreme extremes.
- These practices will lead to improved sustainability, as well as water and air quality.

