South Dakota State University Sustainability-Related Research

	Requestor Name	Department(s)	Project Title(s)
1	John McMaine	Ag & Biosystems Engineering, Extension	Soil-Water Function of Established Conservation Systems
[redacted]			Mitigating Impacts of Excess Water Quantity through Improved Soil Health
			Engaging Citizens in Low Impact Development from Design to Implementation and Beyond
			Engaging Citizens in Low Impact Development from Design to Implementation and Beyond & Engaging the Community with Rainwater Harvesting at Three Different Scales
			Engaging the Community with Rainwater Harvesting at Three Different Scales
			Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety
2	Lin Wei	Ag & Biosystems Engineering	Application of biosolid-based nitrogen control release fertilizers to improve nitrogen use efficiency of corn production and soil health in South Dakota
[redacted]			Develop Biochar Composite Control Release Fertilizer for Sustainable Corn Production
3	Christopher Hay	Ag & Biosystems Engineering	Managing Water for Increased Resiliency of Drained Agricultural Landscapes
4	Van Kelley	Ag & Biosystems Engineering	Stormwater management and ecosystem health: The complementary role of green infrastructure in urban environments.
[redacted]			Nitrogen Fixing Cyanobacteria Cultured for Cost Effective Biofertilizer Using Wastewater
			Soil-Water Function of Established Conservation Systems
5	Jason Clark	Agronomy, Horticulture & Plant Science	Application of biosolid-based nitrogen control release fertilizers to improve nitrogen use efficiency of corn production and soil health in South Dakota
[redacted]			Fertilizer N Rate Recommendation Update for Corn
			Fertilizer N Rate Recommendation Update for Corn
			Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System
			Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System: Year 2
6	Paul Johnson	Agronomy, Horticulture & Plant Science	Native Pollinator Inventory in Northeastern South Dakota
[redacted]			Environmental Sustainability of Livestock Production: Dung beetles, Decomposition, and Decision Making
7	Kristopher Osterloh	Agronomy, Horticulture & Plant Science	The Hutton Project: Assessment and Education on the Effects of Long-Term Agriculture in South Dakota.
8	David Clay	Agronomy, Horticulture & Plant Science	Creating Corn Premiums through Precision Conservation and Sustainability Documentation
[redacted]			Creating Corn Premiums through Precision Conservation and Sustainability Documentation.

			Creating Corn Premiums through Precision Conservation and Sustainability Documentation.
			Improving Ecosystem Services in Non-irrigated Sodium Degraded Soils: Switching from soil amendments to Vegetative Remediation
			Novel commercialization farm, field networking to quantify emissions and carbon storage from agricultural bioenergy feedstock production
			Overcoming cover crop adoption barriers in dryland production systems by enhancing water use efficiency and soil health
			Demonstration and evaluation of reduced tillage and cover cropping techniques for managing soil water and improving soil health in the Northern Great Plains
9	Sandeep Kumar	Agronomy, Horticulture & Plant Science	Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety
			Demonstrating the Impacts of Organic Clover on Corn Production, Soil Health and Economic Performance
			Soil Health Economics in South Dakota
			Soil Health Economics in South Dakota
			Yield and economic performance of crop rotation systems in South Dakota
10	Navreet Mahal	Agronomy, Horticulture & Plant Science	Farm-to-Fork: Educating Youth in Sustainable Agriculture for Healthy Food and a Healthy Environment
11	Sutie Xu	Agronomy, Horticulture & Plant Science	Overcoming cover crop adoption barriers in dryland production systems by enhancing water use efficiency and soil health
12	Shaina Westhoff	Agronomy, Horticulture & Plant Science	Rhizolizer Greenhouse Gas (GHG) Emission Measurements
13	Rhoda Burrows	Agronomy, Horticulture & Plant Science, Extension, SDSU West River Research and Extension	SD SARE Plan of Work 2021-22
			SARE-PDP Plan of Work – SDSU, 2019-2020
14	Kenneth Olson	Animal Science, Extension, SDSU West River Research and Extension	SDSU Extension Support of WWF's RSVP Program for Ranchers
			WWF Capacity Building of BeefSD Program
			WWF Capacity Building of BeefSD Program
15	Ruanbao Zhou	Biology and Microbiology	Genetic Engineering Cyanobacteria for Biosolar Production of Biodegradable Rubber
16	Nancy Marshall	Briggs Library	Let's Talk - Big Issues with Local Impact
17	Rouzbeh Ghabchi	Civil & Environmental Engineering	Characterization of the Plant-Based Bio-Asphalt Binder and Bio-Additives
			Feasibility of Using Electronics Waste in Asphalt and Concrete [Phase I-A (Amended)]
			Feasibility of Using Electronics Waste in Asphalt and Concrete (Phase I)
			Electrospun Recycled Polyethylene Terephthalate (PET) Microfibers as an Asphalt Binder Modifier
18	guanghui hua	Civil & Environmental Engineering	Nutrient Removal and Recovery from Stormwater Using Water Treatment Residual Coated Woodchips
			Nutrient Removal and Recovery from Stormwater Using Water Treatment Residual Coated Woodchips
19	Kimberly Cripps	SDSU Extension	SDSU Extension Fair Food Network Double Up National Network Grant Agreement

20	Tong Wang	Ness School of Management & Economics, Extension	Creating Corn Premiums through Precision Conservation and Sustainability Documentation
			Soil Health Economics in South Dakota
			Soil Health Economics in South Dakota
			Enhancing Soil Ecosystem Health and Resilience through Pasture Cropping
			The Impact of Cattle Grazing and Finishing Practices on Greenhouse Emissions
			Yield and economic performance of crop rotation systems in South Dakota
			Farmers' adoption and perceived benefits of diversified crop rotations in the margins of U.S. Corn Belt
21	jason schoch	Agriculture Program-Ext, Extension	Tatanka Ki Owetu, the Renewal, AgrAbility
22	Srinivas Janaswamy	Dairy & Food Science	Bio-based products from agricultural residues
			Cellulosic fraction-based functional products from agricultural biomass and agricultural processing by-products
23	Sergio Martinez Monteagudo	Dairy & Food Science	Value Creation from Wastewater Streams through Pressure Chemistry
24	reinaldo tonkoski	Electrical Engineering and Computer Science	Development and validation of models to assess dynamic response of converter-dominated power systems across multiple spatiotemporal scales
			INTERN Supplemental Funding - Ujjwol Tamrakar - Power-Hardware-in-the-Loop Techniques for Design of Power System Controllers
25	Yue Zhou	Electrical Engineering and Computer Science	Development of Biomass-derived Aerogel for Energy Storage Applications
26	Xiaoyang Zhang	Geospatial Science Center of Excellence, Geography and Geospatial Sciences	Effectiveness and monitoring of large-scale carbon-loss mitigation activities in Indonesia's peatlands
27	Anamika Prasad	Department of Mechanical Engineering	Translating Cellulose-based Biomass to Engineered Biocomposite
28	Stephen Gent	Mechanical Engineering, Division of Research & Economic Development, North Central Regional Sun Grant Center	Development of Biomass-derived Aerogel for Energy Storage Applications
			Collaborative Research: A Scalable Sustainability-Based Approach to a Novel Demand Response Paradigm in the Emerging Smart Grid
			Advancing the National Bioeconomy through Regional Sun Grant Centers: 2020-2024
29	Alexander Smart	Agriculture Program-Ext, Natural Resource Management	Building Invasive Woody Plant Control Capacity on South Dakota Working Lands
			SARE-PDP Plan of Work – SDSU, 2019-2020
30	pete bauman	Agriculture Program-Ext, Natural Resource Management	Grassland Restoration Education And Research Plots: Grassland Management School
			Identifying Native (Undisturbed) areas within the Dakota Grassland Focus Area of Western SD (Phase IX
			Phase VIIIL Completing base inventory for southwestern South Dakota Native (Undisturbed) Habitats (SDACD $35,000 funds)
			Phase VIIIL Completing base inventory for southwestern South Dakota Native (Undisturbed) Habitats (SDGFP $10,000 funds)
31	Krista Ehlert	Natural Resource Management, Extension, SDSU West River Research and Extension	Investigating Rangeland Systems and Practices: Enhancing Sustainable Agriculture Curriculum in South Dakota
			SDSU Extension Support of WWF's RSVP Program for Ranchers
			WWF Capacity Building of BeefSD Program

			WWF Capacity Building of BeefSD Program
			Improving watershed health, wildlife habitat, and ranch profitability: education and demonstration of low-cost, low-input riparian restoration tools
32	Lan Xu	Natural Resource Management	Overcoming cover crop adoption barriers in dryland production systems by enhancing water use efficiency and soil health
			Building Invasive Woody Plant Control Capacity on South Dakota Working Lands
			Modeling groundwater datasets for development of ground and surface water management plan for Pine Ridge Reservation, SD
33	Joshua Stafford	Natural Resource Management, SD Cooperative Fish & Wildlife Research Unit	Quantifying restorable wetlands in South Dakota
			Partnering to quantify restorable wetlands in the Prairie Pothole Region of Eastern South Dakota.
34	lora perkins	Natural Resource Management, Agronomy, Horticulture & Plant Science	Beneficial Insect Preference Between Native and Non-Native Perennial Flowering Plants"
			Deciphering diversity for landowners: identifying restoration targets to best support soil health and pollinators in the Northern Great Plains
			Environmental Sustainability of Livestock Production: Dung beetles, Decomposition, and Decision Making
			Improving Ecosystem Services in Non-irrigated Sodium Degraded Soils: Switching from soil amendments to Vegetative Remediation
35	Jeremiah Bergstrom	School of Design, Landscape Architecture	Engaging the Community with Rainwater Harvesting at Three Different Scales
			Floodplain Habitat Design to Establish Green Infrastructure Practices along Woodbridge River (NJ)
			Resilient New Jersey Community Primer
			Technical Assistance for Climate Adaptation Planning
			Technical Assistance for Climate Adaptation Planning (Supplemental Award)
36	Donald Burger	School of Design, Landscape Architecture	Engaging the Community with Rainwater Harvesting at Three Different Scales
			SD DOH City Planning Assessment Project
37	Vance Owens	North Central Regional Sun Grant Center, Division of Research & Economic Development	Advancing the Bioeconomy through Regional Sun Grant Centers
38	Suzette Burckhard	Civil & Environmental Engineering	A study of the degradation of bioplastics in the environment to support healthy soil and water for agricultural use
39	John Maursetter	Agricultural and Biosystems Engineering, Mesonet at SDState, Water Resources Institute	Nitrogen Fixing Cyanobacteria Cultured for Cost Effective Biofertilizer Using Wastewater
			Soil-Water Function of Established Conservation Systems
40	Anthony Bly	Agriculture Program-Ext, Extension	Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety
			Fertilizer N Rate Recommendation Update for Corn
			Demonstrating the Impacts of Organic Clover on Corn Production, Soil Health and Economic Performance
			Fertilizer N Rate Recommendation Update for Corn

			Overcoming cover crop adoption barriers in dryland production systems by enhancing water use efficiency and soil health
			Soil Health Economics in South Dakota
			Soil Health Economics in South Dakota
41	Gwen McCausland	Agricultural Heritage Museum	The Hutton Project: Assessment and Education on the Effects of Long-Term Agriculture in South Dakota.
42	Peter Sexton	Beresford Field Station-AES, Extension	Demonstrating the Impacts of Organic Clover on Corn Production, Soil Health and Economic Performance
			Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System
			Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System: Year 2
43	Deepak Joshi	Agronomy, Horticulture, & Plant Science	Rhizolizer Greenhouse Gas (GHG) Emission Measurements
44	David Karki	Agriculture Program-Ext, Extension	SD SARE Plan of Work 2021-22
45	Stacy Hadrick	Animal Science, Extension	SDSU Extension Support of WWF's RSVP Program for Ranchers
			WWF Capacity Building of BeefSD Program
			WWF Capacity Building of BeefSD Program
46	Andrea Bjornestad	School of Education, Counseling, &Human Development, Extension	Tatanka Ki Owetu, the Renewal, AgrAbility
47	Michael Wimberly	Natural Resource Management	Building Invasive Woody Plant Control Capacity on South Dakota Working Lands
48	Maribeth Latvis	Natural Resource Management, Herbarium	Deciphering diversity for landowners: identifying restoration targets to best support soil health and pollinators in the Northern Great Plains
49	Gary Anderson	Ag & Biosystems Engineering	Nitrogen Fixing Cyanobacteria Cultured for Cost Effective Biofertilizer Using Wastewater
50	McDaniel Rachel	Ag & Biosystems Engineering	Mitigating Impacts of Excess Water Quantity through Improved Soil Health
			Engaging Citizens in Low Impact Development from Design to Implementation and Beyond
51	Yajun Wu	Biology & Microbiology	Application of biosolid-based nitrogen control release fertilizers to improve nitrogen use efficiency of corn production and soil health in South Dakota
			Develop Biochar Composite Control Release Fertilizer for Sustainable Corn Production
52	David Kringen	Agriculture Program-Ext, SDSU Extension, Natural Resource Management, Agricultural and Biosystems Engineering	Engaging Citizens in Low Impact Development from Design to Implementation and Beyond
			Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety
53	Jeppe Kjaersgaard	Ag & Biosystems Engineering	Managing Water for Increased Resiliency of Drained Agricultural Landscapes
54	Peter Kovacs	Agronomy, Horticulture, & Plant Science	Fertilizer N Rate Recommendation Update for Corn
			Fertilizer N Rate Recommendation Update for Corn
			Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System
55	Sharon Clay	Agronomy, Horticulture, & Plant Science	Improving Ecosystem Services in Non-irrigated Sodium Degraded Soils: Switching from soil amendments to Vegetative Remediation
56	Amanda Bachmann	Agriculture Program-Ext, Extension	SD SARE Plan of Work 2021-22

57	Blair Amanda	Animal Science, SDSU Extension, SDSU West River Research and Extension	WWF Capacity Building of BeefSD Program
			WWF Capacity Building of BeefSD Program
58	Kristin Echtenkamp	Briggs Library	Let's Talk - Big Issues with Local Impact
59	Nadim Wehbe	Civil & Environmental Engineering	Electrospun Recycled Polyethylene Terephthalate (PET) Microfibers as an Asphalt Binder Modifier
60	Christopher Schmit	Civil & Environmental Engineering	Nutrient Removal and Recovery from Stormwater Using Water Treatment Residual Coated Woodchips
			Nutrient Removal and Recovery from Stormwater Using Water Treatment Residual Coated Woodchips
61	Kasiviswanathan Muthukumarappan	Ag & Biosystems Engineering	Bio-based products from agricultural residues
62	Hailong Jin	Ness School of Management & Economics	Soil Health Economics in South Dakota
			Soil Health Economics in South Dakota
			Farmers' adoption and perceived benefits of diversified crop rotations in the margins of U.S. Corn Belt
63	Timothy Hansen	Electrical Engineering & Computer Science	Development and validation of models to assess dynamic response of converter-dominated power systems across multiple spatiotemporal scales
64	Jameson Brennan	Animal Science, SDSU West River Research and Extension, SDSU Extension	Improving watershed health, wildlife habitat, and ranch profitability: education and demonstration of low-cost, low-input riparian restoration tools
65	Joshua Leffler(Alan.leffler)	Natural Resource Management	Environmental Sustainability of Livestock Production: Dung beetles, Decomposition, and Decision Making
66	Volker Brozel	Biology & Microbiology	Develop Biochar Composite Control Release Fertilizer for Sustainable Corn Production
67	Daniel Ostrem	WATER RESOURCES INSTITUTE, SDSU Extension	Managing Water for Increased Resiliency of Drained Agricultural Landscapes
68	Aaron Bramstedt	Agronomy, Horticulture and Plant Science	Fertilizer N Rate Recommendation Update for Corn
			Fertilizer N Rate Recommendation Update for Corn
69	Linda Kott	Briggs Library	Let's Talk - Big Issues with Local Impact
70	Patricia Hammond	Food & Families Programs-Ext, Extension	Tatanka Ki Owetu, the Renewal, AgrAbility
71	Jessica Schad	Sociology and Rural Studies	Environmental Sustainability of Livestock Production: Dung beetles, Decomposition, and Decision Making
72	Deepthi Kolady	Ness School of Management & Economics	Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety
73	Gared Shaffer	SDSU Extension	Demonstrating the Impacts of Organic Clover on Corn Production, Soil Health and Economic Performance
74	ShinYi Marzano	Biology and Microbiology	Improving Ecosystem Services in Non-irrigated Sodium Degraded Soils: Switching from soil amendments to Vegetative Remediation
75	Morgan Sederburg	Briggs Library	Let's Talk - Big Issues with Local Impact
76	Jack Davis	Agriculture Program-Ext, Extension, Ness School of Management and Economics	Soil Health Economics in South Dakota
			Soil Health Economics in South Dakota
77	Sean Kelly	Agriculture Program-Ext, Extension, Natural Resource Management	Building Invasive Woody Plant Control Capacity on South Dakota Working Lands
78	Maaz Gardezi Syed	Sociology and Rural Studies	Roadmap to Water Resilience - Valuing Water as a Resource for Improved Ag Land Profitability and Downstream Safety

79	Adele Harty	SDSU Extension	WWF Capacity Building of BeefSD Program
80	Leacey Brown	Food & Families Programs-Ext, Extension	Tatanka Ki Owetu, the Renewal, AgrAbility
81	Sekaran Udayakumar	Agronomy, Horticulture & Plant Science	Demonstrating the Impacts of Organic Clover on Corn Production, Soil Health and Economic Performance
82	Robin Salverson	Agriculture Program-Ext, Extension	WWF Capacity Building of BeefSD Program
83	Elias Uddin	Dairy and Food Science	Effects of endomicrobials (direct-fed microbiomes) on enteric methane, physiological and production responses of lactating dairy cows
[redacted]			Impact of nitrate and 3-nitrooxypropanolon the carbon footprint of milk produced in confined feeding systems across regions in the United States. Journal of Dairy Science.
			A cradle-to-farmgate life cycle assessment of milk: Effects of dietary forage (alfalfa vs. corn silage at two levels) and cow breed (Holstein vs. Jersey) on greenhouse gas emissions.
			Review: Impact of food and climate change on pastoral industries. Frontiers in Sustainable Food Systems Journal. Frontiers in Sustainable Food Systems
			Effects of dairy cow breed and dietary forage on greenhouse gas emissions from manure during storage and after field application.
			Enteric methane emissions, production performances, rumen characteristics, nutrient digestibility, nitrogen and energy balance of Holstein and Jersey cows fed dietary forage neutral detergent fiber at 2 levels from 2 sources.
			Invited Review: Emission and mitigation of greenhouse gases from dairy farms: The cow, the manure and the field.
84	David Wright	Agronomy, Horticulture & Plant Science	Food Pod
85	Hanxiao Feng	Agronomy, Horticulture & Plant Science	Yield and economic performance of crop rotation systems in South Dakota
86	Oladipo Obembe	Ness School of Management & Economics	Farmers' adoption and perceived benefits of diversified crop rotations in the margins of U.S. Corn Belt
87	Dapeng Li	Geography & Geospatial Sciences	Farmers' adoption and perceived benefits of diversified crop rotations in the margins of U.S. Corn Belt
88	Brian Logue	Chemistry and Biochemistry	Surveying PFAS in drinking water

	Final list of academic departments (pulled from list on above)
1	Agricultural and Biosystems Engineering
2	Agronomy, Horticulture and Plant Science
3	Animal Science
4	Biology & Microbiology
5	Chemistry and Biochemistry
6	Civil and Environmental Engineering
7	Dairy and Food Science
8	Electrical Engineering and Computer Science
9	Geography and Geospatial Sciences
10	Mechanical Engineering
11	Natural Resource Management

12	Ness School of Management and Economics
13	School of Design
14	School of Education, Counseling & Human Development
15	School of Psychology, Sociology & Rural Studies