

The meeting of the South Dakota Nutrient Research and Education Council (NREC) was called to order by Chairman Ryan Wolf at 9:30 AM, December 3, 2020 via teleconference.

In attendance were council members Kevin Bachmeier, Tom Gere, Bill Gibbons, Bruce Haines, Richard Jenny, Bryan Jorgensen, Jim Loken, Dana Loseke, Colin Nachtigal, Ryan Schuchhardt, Jason Simmons, Richard Vasgaard, Robert Walsh, Paul Wegleitner, and Ryan Wolf. Council member absent from the meeting was Jamie Chalcraft. Also, in attendance were Kathy Zander, Executive Director, South Dakota Agri-Business Association and Angela Loftesness, Assistant to the Dean, College of Agriculture, Food and Environmental Sciences.

Ryan Wolf welcomed everyone to the meeting and asked for any additions or changes to the agenda. Richard Vasgaard moved to approve the agenda and the motion was seconded by Jim Loken. The motion carried.

Ryan Wolf asked for approval of the July 22, 2020 meeting minutes and asked for the correction of the spelling of his last name. Bruce Haines moved to approve the minutes from the July 22, 2020 minutes with Wolf spelled correctly. The motion was seconded by Kevin Bachmeier and the motion carried.

Jim Loken reviewed the November 24, 2020 financial report. The available balance and future income were discussed along with expenses for some of the participants. It was suggested that a running total of multi-year projects be added to the bottom of future financial reports to indicate possible future commitments. Ryan Schuchhardt moved to approve the Financial Report dated November 24, 2020. The motion was seconded by Robert Walsh and the motion carried.

The following no-cost extensions were reviewed, as follows:

- Dwayne Beck: The impact of soil test level differences on crop response, P leaching, and P runoff under long-term no-till management in South Dakota. Richard Vasgaard moved to approve the no-cost extension. The motion was seconded by Jim Loken and the motion carried.
- Jason Clark:
 - Building Potassium Fertilizer Guidelines that Include Soil Classification Information with the request to move \$22,500 to help purchase and build fertilizer placement and rate equipment.
 - Combining Soil fertility and Soil Health to improve Corn Potassium, Phosphorus, and Sulfur Fertilizer Recommendations with the request to move \$8000 to help purchase and build fertilizer placement and rate equipment.
 - Fertilizer N Rate Recommendation Update for Corn Information with the request to move \$21,500 to help purchase and build fertilizer placement and rate equipment.
 - Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System Information with the request to move \$10,000 to help purchase and build fertilizer placement and rate equipment.

- Survey of South Dakota Producers' Current Nutrient Management Practices Information with the request to move \$5000 to help purchase and build fertilizer placement and rate equipment.

Richard Jenny moved to approve the no-cost extensions for Jason Clark. The motion was seconded by Kevin Bachmeier.

- Peter Kovacs: Sulfur source and application timing effect on soybean yield project and In-season N application in corn to improve fertilizer efficiency in eastern South Dakota. Jim Loken moved to approve the no-cost extension. Richard Vasgaard seconded the motion and the motion carried.
- John McMaine: Identifying Nutrient Loss Hot Spots in Tile Drainage. Richard Vasgaard moved to approve the no-cost extension. Richard Jenny seconded the motion and the motion carried.

Bryan Jorgensen left the meeting at 10:19 AM.

Project funding renewals were reviewed, as follows:

- John McMaine: Identifying Nutrient Loss Hot Spots in Tile Drainage (3SA431), Year 2, \$12,820.
- Jason Clark: Combining Soil fertility and Soil Health to improve Corn Potassium, Phosphorus, and Sulfur Fertilizer Recommendations (3SA430), Year 2, \$68,641.
- Jason Clark: Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for Optimal Corn Grain Yield in a No-till System (3SB417), Year 3, \$73,170.
- David Clay: Building a South Dakota Corn No-tillage N Recommendation Algorithm that Considers Improvements in Soil Health (3SB416), \$100,000.
- Jason Clark: Building Potassium Fertilizer Guidelines to Include Soil Classification Information (3SA433), Year 2, \$108,741.
- Peter Kovacs: Sulfur source and application timing effect on soybean yield (3SB415), Year 3, \$75,000.
- David Karki: Calibration of Nitrogen Requirement of Oats Grown for Grain in South Dakota (3SC340), Year 3, \$34,063.

Ryan Schuchhardt moved to approve all the funding renewals, as listed. The motion was seconded by Richard Jenny and the motion carried.

Ryan Wolf asked council members if there was any other business to be discussed. Kathy Zander noted that 10% of projects funded beginning in 2020 are required by law to support water quality projects. The total amount of projects funded in 2020 were \$847,312 with water quality projects approved for \$184,233 or approximately 21.75%, exceeding the 10% requirement. Ryan Wolf also reminded the Council that an application has been submitted for the Directors and Officers Liability Insurance policy for 2021. Ryan also noted that Richard Vaasgard would be leaving the Council since he was elected to serve in the Legislature. Kathy stated she would contact Krystil Smit with the South Dakota Farm Bureau to see where they are in the process of finding a representative to recommend to the Secretary of Agriculture.

At this time, the council took a break and reconvened at 11:00 AM to hear project presentations, and took the following actions:

- Peter Kovacs: Investigating Impact of Starter Fertilizer Placement on Plant Development, Grain Yield, and Nutrient Uptake (New), \$ 85,000. Richard Jenny moved to approve this project with amendments that would take out the 2 2X2 treatments and add a 0x2 along with a high in furrow treatment. Kevin Bachmeier seconded the motion and the motion carried.
- Peter Kovacs: Investigating fertilizer response and requirement in high protein soybean varieties (New), \$79,221. Richard Vasgaard moved to approve this project. The motion was seconded by Collin Nachtigal and the motion carried.

The Council took a break for lunch and reconvened at 1:00 PM to continue hearing project presentations and took the following actions:

- Sandeep Kumar: Soil nutrients, water availability, nitrate leaching, and crop yield as affected by long-term diversified crop rotations and tillage systems in South Dakota (New), \$80,000. Richard Jenny moved not to approve this project. The motion failed due to the lack of a second. Bruce Haines moved to approve this project and Kevin Bachmeier seconded the motion. The motion failed to garner a majority vote, so this project was not funded.
- Sandeep Kumar: Influences of manure and fertilizer application in corn-soybean-spring wheat/cover crops rotation on Water availability and quality, soil fertility, and crop yield (New), \$80,000. Bruce Haines moved to approve this project. Richard Vasgaard seconded the motion and the motion carried.
- Susan Citrak: Soil characterization and how the contents affect crop growth and water quality (New), \$98,068. Bruce Haines moved to approve the project and was seconded by Richard Vasgaard. The motion failed to garner a majority vote, so this project was not funded. Robert Welch asked if Jay Gilbertson could be contacted to see if the trace minerals that Susan Citrak presented are of concern and the proposal could be revisited if needed.
- Srinivas Janaswamy: Synthetic nodules for nitrogen nutrition in cereal crops (New), \$49,932. Bruce Haines moved to approve this project with an amendment requiring a person with an agronomy background assist in the research. The motion was seconded by Colin Nachtigal and the motion carried.
- David Clay: Influence of nitrogen stabilizers and application dates in no-tillage corn production on nitrogen use efficiency and N losses to the atmosphere and groundwater (New), \$88,000. Colin Nachtigal moved to approve this project. The motion was seconded by Bruce Haines and the motion carried.
- Dwayne Beck: The impact of phosphorus soil test level differences on crop response, phosphorus leaching, and phosphorus runoff under long-term no-till management in South Dakota (3SC426), \$49,752. Jim Loken moved to approve this project. The motion was seconded by Richard Jenny and the motion carried.
- Jason Clark: Fertilizer N Rate Recommendation Update for Corn (3SC535), \$87,713. Jim Loken moved to approve this project. The motion was seconded by Richard Jenny and the motion carried.

The total amount of projects funded in 2021 were \$992,053 with water quality projects approved for \$230,572 or approximately 23.25%, exceeding the 10% required by law.



MINUTES
December 2, 2020

Ryan Schuchhardt rejoined the meeting at 2:25 PM. and Richard Vasgaard left the meeting at 3:10 PM.

The next meeting will be held during in late July of 2021 and Angela Loftesness will send the Council dates to be considered.

Ryan Wolf called for the meeting to adjourn at 3:30 PM.

Submitted by:



Ryan Wolf, Chairman