

The meeting of the South Dakota Nutrient Research and Education Council was called to order by Chairman Ryan Wolf at 9:30 AM, December 6, 2018 at the McCrory Gardens Visitor Center on the campus of South Dakota State University, Brookings, SD.

In attendance were council members Kevin Bachmeier, Tom Gere (SDDA), Bill Gibbons, Trevor Hupp (SDDA), Richard Jenny, Jim Loken, Colin Nachtigal, Ryan Schuchhardt, Richard Vasgaard, Robert Walsh, Paul Wegleitner, and Ryan Wolf. Council members absent from the meeting were Bryan Jorgensen, Dana Loseke, and Tom Wolles. 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 everyone to introduce themselves.

Colin Nachtigal reviewed the minutes from the June 17, 2018, NREC meeting. Ryan Wolf asked for approval of these minutes. Richard Vasgaard moved to approve the minutes from the June 17, 2018 NREC meeting. The motion was seconded by Robert Walsh and the motion carried.

Jim Loken presented the financial report. The available balance was discussed along with expenses for some of the participants. Jim Loken agreed to follow-up with Justin Werkmeister about the expenses from Kumar Sandeep. Ryan Schuchhardt moved to approve the Financial Report dated November 28, 2018. The motion was seconded by Richard Vasgaard and the motion carried.

Ryan Wolf presented the list 2019 Renewed and New Award Applications including nine projects up for renewal and nine new projects. As discussed during the June meeting, seven projects will be renewed and two will present results during this meeting.

Richard Jenny moved to renew the funding in 2019 for the following projects for a total of \$414,909:

- Calibration of Nitrogen Requirement of Oats Grown for Grain in SD, Year 2 of 3 (David Karki) \$33,314
- Exploring New Microbial Pathway for Nitrate Control by Cover Crop and Bioreactor at the Southeast Research Station, Year 2 of 2 (Shin-Yi Marzano) \$70,790
- Sulfur and Nitrogen Dynamics for Rye Raised as a Cover Crop, Year 2 (Peter Sexton) \$48,749
- Impacts of Manure and Inorganic Fertilizer on Soil Fertility, Water Quality, and Crop Yield in South Dakota, Year 2 of 2 (Sandeep Kumar) \$40,238
- In-season N application in corn to improve fertilizer efficiency in eastern South Dakota, Year 2 of 3 (Peter Kovacs) \$120,316
- The Impact of Soil Test Level Differences on Crop Response, P Leaching, and P Runoff Under Long-term No-till Management in South Dakota, Year 2 of 2 (Jose Guzman) \$59,795
- Fertilization Management to Reduce Potential Yield Declines Following No-till Adoption in South Dakota, Year 2 of 3 (Christopher Graham) \$41,707

The motion was seconded by Kevin Bachmeier and the motion carried.

The council then reviewed the NREC Grant Program Terms and Conditions document provided by Ryan Wolf. The date for a request for any budget revisions and extensions of the grant period was changed from October 1 to November 1. James Loken moved to approve the Grant Terms and Conditions document. The motion was seconded by Richard Jenny and the motion carried.

At this time, the two project updates were given by researchers who were seeking renewal for their projects, as follows:

1. Srinivas Janawamy's project for Developing Low-cost Technologies to Improve Water Quality and Sustainable Agricultural Practices in South Dakota was not renewed.
2. Ruanbao Zhou's project for Identifying Solar-Powered N<sub>2</sub>-Fixing Cyanobacteria in Native Grasslands for Soil Health and Bio-Nitrogen Fertilizer Application in South Dakota for \$69,816 was renewed for 2019. This is year 2 of 3.

Presentations for nine new projects were given and the projects that received funding for a total of \$381,718, are as follows:

1. Influence of Interseeding Cover Crops on Nitrogen Fertilizer Rate Requirement for optimal Corn Grain Yield in a No-till System, Year 1 of 3 (Jason Clark) \$82,983
2. Survey of South Dakota Farmers' Current Nutrient Management Practices Year 1 of 2 (Jason Clark) \$58,712
3. Acquisition of a Truck-Mounted Hydraulic Soil Probe for Subsampling Soil, Year 1 of 1 (Jason Clark) \$30,050
4. Building a South Dakota Corn No-tillage N Recommendation Algorithm that Considers Improvements in Soil Health, Year 1 of 3 (David Clay) \$89,204
5. Sulfur Source and Application Timing Effect on Soybean Yield, Year 1 of 1 (Peter Kovacs) \$70,769

Projects not approved were as follows:

1. Determining Application Rate and Timing Effect on Mineralization and Efficiency Rates of Enhanced Efficiency Fertilizers in South Dakota Reduced Tillage Corn Cropping Systems (Stephanie Bruggeman)
2. Drainage Water Recycling for Improved Nutrient Management and Crop Resilience (John McMaine)
3. Investigating Technologies for Re-use of Municipal and Industrial Effluent for Crop Fertilization and Irrigation in the Big Sioux River Basin (Lisa Kunza)
4. Develop A Root-Targeted-Controlled-Release (RTCR) Technology to Improve NPK Fertilizer Efficiency in Corn Production in South Dakota (Lin Wei)

The council resumed regular business and discussed the proposal process. The call for pre-proposals will be moved up to June 15<sup>th</sup> with an application deadline of August 15<sup>th</sup>. The topics of interest for the RFPs will remain the same from 2018.

Media releases and the NREC website were discussed. Kathy Zander stated that she would send the list of approved projects to Tom Gere and he will work with SDDA to draft and distribute a media release. In addition, SDABA would update the NREC website with project



**MINUTES**  
**December 6, 2018**

updates, update the RFP and list the new projects that were funded. In addition, requiring final research reports to list the purpose and methods used, results and impacts, the use of English units and a project summary, were discussed.

The next meeting will be held during late July in Brookings.

The meeting adjourned at 4:00 PM.

Submitted by:



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Ryan Wolf, Chairman