



PROGRESS REPORT

PROJECT TITLE: Is Fixed Ammonium an Important Part of Nitrogen Cycling?

PROJECT NUMBER: 6082-22DD/6100-23DD (U of M CON000000096856)

REPORTING PERIOD: Jul. 1 – Sept. 30, 2023

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1.) PROJECT ACTIVITIES COMPLETED DURING THE REPORTING PERIOD. (*Describe project progress specific to goals, objectives, and deliverables identified in the project workplan.*)

I was busy collecting samples from the four locations. All monthly samples were collected as planned. Plant tissue samples were planned for R2 and were collected from 3 of the 4 locations. The site near Rochester had a hail storm around the 20th of July that caused severe defoliation. We did not take any plant samples from that location as the data would not have been good due to the majority of the ear leaf being lost off the plants. All soil samples were collected as planned at Rochester and I am planning on harvesting the study and collecting grain samples as planned. We also started to process the summer soil samples. The K extractions are complete on the May and June samples. We have the ammonium and nitrate extractions completed, but the concentration of ammonium and nitrate has not been determined. I have also been working on the procedure for the fixed potassium analysis as some of the values were low from the soil sampled in 2022. I am planning on re-running all 2022 samples for fixed K over the winter. Fixed ammonium analysis is complete for the 2022 samples, but that analysis has not been started on the 2023 soils at this time.



Aerial image from the Rosemount trial taken on July 6, 2023

2.) IDENTIFY ANY SIGNIFICANT FINDINGS AND RESULTS OF THE PROJECT TO DATE.

I reported the bulk of the 2022 results in the last quarterly report. I have nothing further to report as we are just getting new data collected for the 2023 growing season and I have very little data to report.

3.) CHALLENGES ENCOUNTERED. *(Describe any challenges that you encountered related to project progress specific to goals, objectives, and deliverables identified in the project workplan.)*

None

4.) FINANCIAL INFORMATION *(Describe any budget challenges and provide specific reasons for deviations from the projected project spending.)*

None

5.) EDUCATION AND OUTREACH ACTIVITIES. *(Describe any conferences, workshops, field days, etc attended, number of contacts at each event, and/or publications developed to disseminate project results.)*

I have not recorded or authored anything using the research data in this particular quarter.