



INNOVATION GRANT PROGRESS REPORT

PROJECT TITLE: On-farm Evaluation of the Potential Benefits of Variable Rate Nitrogen Application in Corn Fields Applied with Manure

REPORTING PERIOD: Ending August 1st, 2023

FARMER INNOVATOR: Peter Anthony / Anthony Farms, Inc.

COLLABORATING ORGANIZATION/PERSON: Yuxin Miao, University of Minnesota

PHONE NUMBER: 507-779-8754 (Anthony); 612-625-4731 (Miao)

EMAIL: pmanthony@alaska.edu (Anthony); ymiao@umn.edu (Miao)

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

On fields F1 and F13, we used PlanetScope satellite NDVI and soil maps to create prescriptions for in-season supplemental N applications. In-season N was applied V7-V9 stage, in mid-June, as 32% UAN using a medium-clearance self-propelled row-crop sprayer (RoGator 854) equipped with Y-drop style drop tubes (EZ-Drop). UAN was blended with a urease inhibitor to minimize loss potential from surface application. Rainfall within 10 days of application exceeded 2.5 cm at both sites, which should be sufficient to move the N into the root zone.

In a subset of experimental blocks, we took stand counts, sampled whole plants for tissue analysis, and took soil samples.

2.) IDENTIFY ANY SIGNIFICANT FINDINGS AND RESULTS OF THE PROJECT TO DATE.
(There may be none to report at some stages of the project)

-This reporting period covers establishment of the experiment, and at this stage we have no results 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 proposal.)*

-No challenges encountered during the June-July period.

4.) EDUCATION AND OUTREACH ACTIVITIES. *(Describe any opportunities to engage with farmers, influencers or the media about your project.)*

-no education and outreach activities occurred during this reporting period.

5.) HOW CAN WE HELP? *(Please let us know how we can improve the experience or assist in your project if possible.)*