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**Innovation Grant Progress Report**

PROJECT TITLE: Real-Time Liquid Manure Testing and Nutrient Management

REPORTING PERIOD: Q3 2019

FARMER INNOVATOR: A.J. Krusemark

COLLABORATING ORGANIZATION/PERSON: Melissa Wilson

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

Fall 2019 provided another challenge for harvest and manure application. Harvest data was gathered on Fall 2018 and Spring 2019 manure applications. Data analysis has been started, but not yet completed on this information. Initial results look promising for load specific application rates.

Before encountering frozen ground, we were able to apply approximately half of our manure. As a result, we will be applying some additional spring manure in 2020. Manure samples were collected on 60+ loads for nutrient analysis. I will be analyzing this data and comparing it with 2018 results in the coming weeks. This information will be used in conjunction with our management zones to create a true VRT application prescription for some spring 2020 manure application.

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

Final yield data and nutrient analysis is not complete, but I found load to load variation in our hog manure in excess of 5%. This is after several hours of agitation and with a Nuhn triple-port pump. This validates the opportunity to improve our application practices with real-time testing and variable rate application.

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

Snow and wet soil, coupled with early freezing. If the past 2 growing seasons have taught us nothing else, it is the value of a flexible farming system. Cover crop and strip-tillage practices have allowed our farm to adapt to a challenging moisture conditions without sacrificing yield.

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

Last week I shared some of the results of this project as part of Melissa Wilson’s presentation at the Conservation Tillage Conference in St. Cloud. There were many more questions than we had time to answer during the session, sparking good lunch conversation.

I conducted a radio interview with Brownfield last week and look forward to presenting results at the AgExpo in January.

I continue to share a few tid bits on Twitter (@kruser02) and will continue to post progress pictures there.

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

No assistance required at this time.