Progress to Date

This quarter provided challenges for Anna due to travel restrictions put in place in Minnesota from COVID-19. This prohibited her from observing most fields for cover crop growth in the spring before planting. Luckily, all growers who had over winter cover crops were able to send Anna images of their cover crop growth. This spring, while ideal for cash crop planting did not result in very dense cover crop growth. This was reported throughout the southern half of the state and well into Iowa. It is likely that the late harvest hindered cover crop establishment for this growing season, as growers who frost seeded their cover crops had better growth in the spring. The cover crop that did survive the winter and germinated were vigorous in their growth. Later in the spring the western part of the state saw significantly drier conditions compared to the south or east, which likely did impact crops yields.

Anna has been collaborating with growers this summer to help them figure out plans for implementing treatments this fall and next spring. Many growers have figured out what cover crop mix they plan on using, how they are going to apply them, and when. The one site will be aerially applying cover crop this fall given the correct conditions, with a cover crop mix that will winterkill. This trial is starting off in a soybean year, and cover crops can be difficult to establish. Another site interseeded a forage type cover crop mix late into corn and will likely be harvested for forage next spring before planting soybeans. There is also one nutrient management trial that will be spring applying manure, compared to commercial fertilizer. These are all new growers, implementing their treatments for the first time this year.

The Soil Health Partnership has introduced a field check protocol, which is timed for Field Managers to observe differences between treatments at critical time periods throughout the growing season. There were two field checks performed on some fields this growing season, depending on if the treatment had been implemented in the previous year. There were two sites that were eligible for field checks, this year. On a site planted to corn where cover crop and no till were compared to no till without cover crop, the cover crop treatment had considerably less weed pressure, and little to no difference in crop performance. On another site comparing conventional tillage to no till soybeans there were a few interesting differences. The conventional till side had a large population of volunteer corn likely encouraged by the increased seed to soil contact due to tillage. On the no till side the grower baled residue for cattle and created strips within the no till treatment. In the area where there was no residue the soybeans were twice as tall. This could be due to a few things, the residue was too thick and prevented adequate seeding depth, or if the seed made it through to the soil the residue impacted emergence. We are taking quantifiable notes as well as images to detail these processes so that the grower receives a report as well as use the information in our aggregated database.

Unfortunately, the events that Anna was invited to speak at were canceled early in the spring, which limited the amount of public interactions she had in that time. Anna recently participated in work with the Minnesota Office of Soil Health, and Ann Lewandowski to gather information on what would be valuable to growers in terms of studying soil health, what soil health tests would be meaningful, and how to talk about soil health. This was a great way to learn about what our growers think about these kinds of topics and what is important to them. Additionally, many of our growers participated in these conversations and were able to have their voices heard. Anna also participated in a Women and Ag workshop to learn how to adapt her communication strategies for women and women landowners. This event was organized by a group that Anna
is actively engaging with called the Cover Crop Leadership Lab, hosted by The Sustainable Food Lab. From the same group another event called the Grow More Training was issued, which covered many sociology and psychology concepts but focused on effective communication for adoption. The Cover Crop Leadership Lab allows Anna to network with many outside different states and organizations.

The Soil Health Partnership has released a number of different resources through various channels. Some to take note of are:

- The People of Soil Health (Podcast)
- Farmer Resource Library
- SHP 2019 Annual Report
- 2019 Cover Crop Report

While there are many other resources available on our website, we at SHP wanted to highlight some of the accomplishments we have produced in the last few months.

While Anna faced challenges overall during this period, she was also able to spend time thinking and focusing on her growers. She was also able to experience her first planting season with SHP which provided a lot of experience that she will be able to take into the future. We are grateful for the continued support from the Minnesota Corn Growers Association and look forward to bringing these new growers up to speed for their first harvest with SHP.

Financial Summary

Of the grant funding from grant 6030-20DD, $35,265.32 has been utilized for the period of April 1st, 2020 through July 31st, 2020. These expenses will be invoiced through the National Corn Growers Association for the SHP program shortly. These expenses include:

- Personnel & Fringe Benefits - $21,470 – Field Manager support for the work on the sites in Minnesota
- Cooperator Payments - $12,500 – payments to the 4 growers included in the grant for data submission and participation in the program
- Soil Sampling - $70.36 – supplies to prepare for sampling
- Travel - $774.96 – field manager travel to the 4 sites in the grant
- Data Analytics - $450 – analysis on the yield data from the sites