STATUS REPORT: 10-15-44-20231-7527 UMN

• VIEW

• EDIT

Submitted by <u>bob.koch</u> on Mon, 11/30/2020 - 9:23pm Timeline **Reporting Period:** Quarterly Quarter: Q2 I. Status Update:

Specific project achievements during this reporting period:

Objective 1: During this reporting we continued to perform per plant aphid counts, visual defoliation assessments, computer calculated defoliation assessments, and hyperspectral measurements from all plots over multiple weeks at each site. We also harvested the plots from both locations. As indicated earlier, plots were set up in the field in St. Paul and Rochester, MN. In St. Paul, cages were used to manipulate pressure from aphids and Japanese beetles. In addition, we added artificial defoliation treatments in St. Paul. In Rochester cages could not be used so we relied on ambient levels of aphids and beetles.

Objective 1, Goal 1: Yield and quality data were collected from the field plots in St. Paul and Rochester and are currently being summarized and analyzed.

Objective 1, Goal 2: Hyperspectral data collected from field plots in St. Paul and Rochester were collected and will be processed and analyzed this winter.

Challenges encountered

As indicated in the previous report, ambient levels of soybean aphid were high in Rochester, but Japanese beetles and other defoliating insects were low. Therefore, we performed artificial defoliations in the plots that were intended to have defoliating insects. This should provide a nice examination of high aphid pressure (upwards of 1000 aphids per plant) with and without defoliation (at 30% defoliation). Aphid populations in the caged research plots in St. Paul, did not develop as well as we hoped. However, we should still have some data to look at the interaction between defoliation and relatively low aphid pressure (~100 aphids/plant).

Dissemination of data/information during this reporting period

Results of this research and relevant information will be disseminated in presentations and print. This summer, we created a video summarizing this project and the video was shared via MNSoybean's Twitter account.

Reporting Start Date: 08/01/2020 Reporting End Date: 10/31/2020 Status Report Submission Date: 11/30/2020