

Nebraska Soybean Board
Year-End Summary Research Report Form for Multi-Year Projects

Please use this form to summarize the practical benefits of your research project and what has been accomplished. Your answers need to convey why the project is important and how the results will impact soybean production.

Note that this form must be submitted with the 4th Quarter Report in all multi-year projects.

Project # and Title: #1745: Soybean Gall Midge: Evaluating Pest Management Tactics and Plant Disease Interactions **Principal Investigator:** Justin McMechan

Year of Multi Year: 3 of 3 (example: Year 1 of 3, Year 2 of 2)

1. What was the focus of the research project?

This research project is being conducted to evaluate whether or not any interactions occur between plant pathogens and soybean gall midge through field and lab research.

2. What are the major findings of the research?

With the 2022 data included, there does not appear to be a significant interaction between soybean gall midge and plant pathogens both in terms of culturing plant pathogens from infested stems or larval number, plant injury, and yield.

3. Briefly summarize, in lay terms, the impact your findings have had, or will have, on improving the productivity of soybeans in Nebraska and the U.S.

The lack of interaction between plant disease and soybean gall midge is important for the overall management strategy of this new species. We could not detect any differences in larval abundance on plants, plant injury, or yield even with an excessive use of fungicides was applied in the field. This lack of response along with the cost of fungicides should remove the use of a fungicide as a control strategy for soybean gall midge.

4. Describe how your findings have been (or soon will be) distributed to (a) farmers and (b) public researchers. List specific publications, websites, press releases, etc.

The soybean gall midge research group held a webinar series during the winter of 2021 where some of the information from the project was addressed. Information from this project was presented at the S1080 regional multi-state committee meeting as well as several extension events (Soybean Expo, Crop Production Clinics, etc.). We will advertise and deliver information through cropwatch and the soybeangallmidge.org websites.

5. Did the NE soybean checkoff funding of your project, leverage additional State or Federal funding support? Please list sources and dollars approved.

The information from this project will be used as leverage to obtain a USDA grant with Dr. Paul Ayayee to explore the microbiome of soybean gall midge as well as USDA CPPM project with Dr. Ian Keesey to look at the chemical attraction of fungal pathogens under controlled conditions. Both of these potential funding sources need an understanding of the fungal communities that co-occur with soybean gall midge.

Please submit this completed form to the Agriculture Research Division, jmcmahon10@unl.edu, based on the reporting schedule given to you. If you have any questions, please call Jen McMahon at the Agricultural Research Division (402) 472-7082.

Please check your information before submitting the form.

Submit by Email