

## SIREN Project Participants Insights and Observations

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The impact from my perspective was the delivery of the SIREN concept to approximately 100 students in The Worthington and Southwest Star Concepts school districts. We were able to deliver the material in the classroom first with both discussion and hands on activities. Each one of those students then utilized that experience by going into the local fields comparing different sustainability practices and measuring the residue and then interpreting their results. They also worked on fertility comparisons on corn and then compared the growth of the corn with the application rates. This data was then analyzed with computer support (excel) and shared in each classroom with discussion of the results following. The end result was one hundred more students have begun to understand the concept of sustainability in American agriculture.

~ **Rolf Mahlberg**

This is what my immediate thoughts are about SIREN. There are too many positive aspects to write at this time. There have been many aspects about the SIREN project that I found beneficial. One is the fact that I was able to meet with other teachers and plan to do the same type of experiments in my classroom. Another aspect I found as the best benefit, is that the students really came to understand how the scientific method works. They planned most of the experiment and they tended to their plants for several months, while recording and analyzing the data. The students became better at recording data and they saw how important it is to keep a close eye on the results and observations of the experiment. Our experiment did not turn out that well (we really couldn't grow soybeans inside), but I feel that they learned valuable information about science investigations. I believe that they will take the information that they learned in class and use it to become better science students in the future.

~ **Sandy Scheff-Belaen**

As a teacher participating in the SIREN Project I have seen a direct impact on the students that I educate. They are able to explain and support what sustainability means, they can identify sustainable practices and are able to see how what we do now will impact future generations. I have been impressed at the resources and information provided through this project to our classrooms and the time spent educating the educators in sustainable practices. I was also impressed with all the support we received while working on the project portion of SIREN. We were given formulas and information to use in formulating our hypothesis and following the scientific method. The students were able to see the direct correlation of what sustainable practice looked like by reducing and increasing the amounts of P, K, and N on plants. This leads them to a deeper understanding of practices that are not beneficial to the environment. The overall project was beneficial to the students and the future environment.

~ **Heather Winkelman**

As a result of participation in the SIREN project, horticulture students at our high school were able to see first-hand how science works when they tested the effects of nutrient deficiencies on tomato plants. This experience had a positive impact on students in that it gave them ownership of their own learning and piqued their interest in science and plant growth.

~ **Angie Larson**

The SIREN project proved beneficial to me in a few different ways. I appreciated and found useful the ideas we were given to enhance the learning of students in a classroom or field trip setting. I enjoyed our “field trip” days, and took away helpful information that I can use in my role as an educator and as a manager of a small sustainable farm. The sites we visited were applicable to our classroom learning and what we are in turn to pass on to students – sustainability in agriculture. The various instructors were well versed in their areas and did a great job getting the lessons across; therefore, I feel I am better equipped to educate on sustainability going forward.

***~ Tracie Vranich***

The SIREN project has been a very positive experience for me. I have taken many beneficial things away from the group that I can use in my classroom as well as the experience for myself. I feel the on-sight tours are an excellent way to gain background experiences to share in a classroom setting on sustainable agriculture. In addition, the laboratory exercises that Jeff and Paulo have guided us through have been an excellent resource for my Intro to soils and fertility classes at MN West.

***~ Jeff Rogers***

The chance to participate in the SIREN Project through SWROC has been a terrific opportunity. It has allowed our agriculture focused charter school to expand our students learning in the area of agriculture. Through this project our students learned about the importance of sustainability in agriculture. As teachers it has allowed us to grow in our content knowledge and challenged us to raise the bar of expectation for our selves and our students in the area of scientific experiments.

***~Andrea Harder***