Matthew Rhine is currently a senior research associate with the University of Missouri at the Fisher Delta Research Center in Portageville, Missouri. He has conducted cropping systems research for the past 13 years, focusing on improving production practices and crop nutrition in the major cropping systems (corn, cotton, soybean, wheat, rice, etc.) in the Mississippi Delta.

During this time, irrigation efficiency has been a primary focus in his work. In 2007, he began collaborative work to develop management strategies for pivot irrigated rice using variable frequency drives. This work led to funding through the Howard G. Buffett Foundation, NRCS, and various local commodity groups to develop the Crop Water Use App, a user-friendly soil water balance model utilizing the National Weather Service and University of Missouri Mesonet for efficient irrigation scheduling. Since then, adoption of the app has grown widely, with other states eager to broaden its use beyond Missouri’s borders.

Minnesota irrigators can also benefit from such research. As the foundation of those great Mississippi River headwaters, it is the responsibility of Minnesota farmers to be the model of good stewardship, using both their irrigation and nitrogen wisely. This can be achieved through widespread extension efforts and user-friendly tools developed through this position at the University of Minnesota.