Matt Mesenbrink isn’t your typical farmer. Matt grew up on his parents’ home farm north of Holloway and was a normal farm kid living a normal farm life. He helped with all the farm chores to make sure the family farming operation was chugging right along. He always made sure to get all his chores done and find time for some hunting and fishing opportunities around the Pomme de Terre River. As Matt grew older, he moved off the farm and ended up meeting his wife, Kristi, and having three boys Gavin, 12, Teyton, 9, and Ryker, 4. Matt now works for Winfield as a District Sales Manager where he works to bridge the gap between farmers and ag retailers. Through this position that Matt has grown into, he has been itching at the opportunity to get involved with the family farm again. This reinvigoration all started back in 2018.

 With a farm consisting of five fields and about 550 acres of tillable land along the Pomme de Terre River, Matt knew that his margins would be tight and there was little room for error. Matt wanted to maintain or improve profitability while reducing inputs. One way he did this was by evaluating each acre on their fields. He identified certain spots that continually underperformed, where the inputs outweighed the outputs, he decided to tip the scale in his favor. By taking marginal land out of production and enrolling those acres into a combination of the Conservation Reserve Program (CRP) and the Conservation Stewardship Program (CSP), Matt was able to create a better return on investment (ROI) across the entire farm and focus on improving his agronomic practices on the remaining tillable acres.

With three of their five fields being irrigated, Matt knew he wanted to make every drop count that was coming out of the irrigation systems. That meant putting together a prescription for each field and knowing that areas within the field would need different levels of moisture depending on the soil type. To collect the necessary information to write these prescriptions, Matt installed Crop X soil moisture sensors. These sensors allow him to check the soil moisture in his fields anytime, day or night, through an app on his smartphone. The app also allows him to view rainfall totals from the weather stations on his fields and view a soil moisture forecast based on the weather forecast so he knows when he may have to turn the irrigator on and how much will need to be applied. Matt has been pleased with the accuracy of the sensors, noting that when they field check the soil moisture, the sensors are right on the money. In addition to the sensors, he has begun to convert his irrigators over to variable rate irrigation and install low pressure nozzles. The low-pressure nozzles allow for more water to be used by the plant and less to transpire into the atmosphere. The variable rate application allows him to save water by only applying the amount the crop needs, where it needs it.

Another conservation practice that Matt has implemented are water and sediment control basins (WASCOB). A WASCOB is an earthen embankment that is formed perpendicular to a gully in a field. Drain tile and a Hickenbottom intake are used for transporting the temporarily stored water down the field and into a stable outlet location, so as not to cause additional erosion. This conservation practice works well on steeper slopes that have gully erosion issues. Matt has installed two WASCOBs last year, and they functioned so well that he installed three additional WASCOBs on another field this past fall. Both projects were eligible for cost share assistance through the Swift Soil and Water Conservation District (SWCD) office. “It’s a great practice to keep the soil in place and maintain the farmability of the field. It’s a lot easier to farm around a grassed basin than a gully,” he says.

  When it comes to agronomic amendments, Matt knows exactly what he wants to do. By grid sampling the soil on his fields every few years, he has a great understanding of what kinds of nutrients his fields need, how much they need, and where it is needed. He follows the University of Minnesota Extension Service recommendations for nitrogen, phosphorus, and potassium, and applies them using variable rate technology. This falls right in line with the 4 R’s of nutrient management: right source, right rate, right time, and right place. Matt is a big believer in the 4 R’s and practices this management technique diligently. This saves money in the long run by not flat rate applying across entire fields and over or underapplying in areas. With the cost of fertilizer increasing, this variable rate practice will become even more financially responsible.

Another conservation practice that Matt took on in 2018 was incorporating cover crops. Farming in coarse textured soils that are also irrigated was a great opportunity for Matt to start experimenting. His goal for implementing cover crops was to reduce wind erosion year-round, especially over the winter months, and begin building up the organic matter in his fields. Each year, Matt has hired an airplane to fly on a cover crop mix of spring wheat and oats. Cover crop establishment has varied from year to year, with each year providing new challenges, but overall, Matt is pleased with the results. As he continues to learn and expand his understanding of cover crops, his goal was to try seeding cereal rye and oats this year, just to see how that winter-hardy rye will establish this fall and what kind of overwinter benefit he’ll receive. “It’s important to keep trying new things,” he said, “just because a cover crop fails one year or doesn’t do what you were hoping, you shouldn’t give up, just chalk it up as a lesson learned and come back smarter the next time.”

 As Matt continues to find ways to improve his operation, he reached out to the Swift SWCD about the Minnesota Agriculture Water Quality Certification Program (MAWQCP). Through this Minnesota Department of Agriculture program, the SWCD reviewed the current and planned farm practices for Matt. This thorough review includes looking at individual field characteristics, assessing nutrient management, pest management, tillage operations, irrigation and drain tile management, and existing and planned conservation practices. With the review and in field assessments being completed this spring and summer, Matt became fully certified in the MAWQCP. A benefit of this program is being eligible to receive up to $5,000 each year to apply more conservation practices to their land.

 Matt continues to look for ways to improve his operation that will also save him money and benefit the environment. “What is right for the environment is right for the farm, “ he says, “my goal is to raise a healthy family, and I do that by taking care of the land in a way that not only benefits my family, but all families in the community. It is my responsibility as a farmer to do just that.”