For centuries, farmers have known the value manure’s organic matter has on their soil health. Better bulk density, more micronutrients and improved soil aggregation results in a healthier soil that can better withstand erosion and runoff and provide better yields.

When manure is used as a crop fertilizer, especially when injected, it becomes a key strategy to Iowa’s overall effort to reduce nutrient loss into water sources. For farmers who have livestock or have access to the manure generated from nearby barns, it can also mean a more secure future in farming. In addition to its restorative properties and yield bumps, manure is generally cheaper than commercial fertilizer.

We asked two farmers—James Doxtad and Jordan Mathisen how they use manure in their cropping operations.

“...The more fodder, the more flesh; the more flesh, the more manure; the more manure, the more grain.
—Justus von Liebig, founder of organic chemistry

Key Facts on Manure

- Manure increases the amount of water soil can hold, which reduces nutrient run-off
- Manure better restores soil health by increasing organic matter
- Using manure as a crop fertilizer, along with injecting manure, is a key part of Iowa’s overall effort to reduce nutrient loss into water sources
How did you get into farming?
My grandfather moved to Holstein from Nebraska and began farming around 1950. I come from a long line of farmers—my dad took over the farm after my grandfather, and now I’ve taken on a good portion of the planting and harvesting of our 1,200-acre farm. That’s not before I went to Iowa State University with plans to get a degree and set the world on fire. I spent just enough time in a cubicle to make certain that I didn’t want to be confined to an office, followed by some work in California and Minnesota. I was in between jobs when I got the call from my dad, who said he had an opening and needed help. I returned to Iowa to pitch in on the farm and found my calling. I knew I wanted to do this for the rest of my life. That was about ten years ago.

You get manure from three barns on your land. Tell us your experience.
We’re part of Iowa Select Farms’ Crop Fertility Plus Program, so we don’t own or take care of the pigs—other nearby farmers do. But we do get the fertility from the manure. It’s a great partnership.

Manure is better than commercial fertilizer because it brings a lot more organic material to the soil. It’s also cheaper without the application costs and is saving me over $100,000 a year in comparison to commercial fertilizer.

Have you seen benefits in the soil health and/or crop yields?
I have one farm that has had manure consistently on it every other year with the corn bean rotation. That farm’s yields beats the farms around it, anywhere from 10 to 15 bushels to the acre on corn.

Why did you decide to apply your own manure?
The application piece is expensive, and at the same time, it’s something I wanted to take on myself. I was able to invest in the equipment and I really enjoy fieldwork. I went through all of the training and certification, and have a hired man who did the same. If I am still combining he can get started on the manure application, it works great especially when we have a short window.

What about manure management planning—do you take that on?
Our manure management plans are done by the professionals. It’s an important piece to the nutrient planning and I prefer to have it done by a third party. They base the plan within the limits of the DNR and utilize data from both soil and manure analysis. I can’t think of a time when we’ve felt like we aren’t getting enough manure (fertilizer) for it to be beneficial as far as yield goes.

What’s it like working with the Iowa Select Farms team?
They are terrific. I work mostly with Kent Pliner and Brandon Scheuring. Both are nice and knowledgeable, and the whole team has great service from both a farmer and manure application perspective.

Just recently we worked through an issue at one of the newer barns, where the tree lines were prohibiting access to one of the pits. We worked together to get a pipe installed to protect the trees from being damaged and to help me get easier access. It has always been a good working relationship.

Let’s talk neighbor relations
We’re in a big farming community. All of my neighbors have their own tanks and put on their own manure, too. So it’s really a friendly neighborhood when it comes to harvest and application season. The farmers around here understand the value it has, and we all help each other out.

What additional steps are you taking on your farm to protect water quality?
We have 90-foot buffer strips around every body of water we farm around. We farm probably 10 miles of river, so there’s buffer strips in place to protect from runoff.

As a farmer, why is it important for you to be a good steward of the land?
Well, if you treat the soil well, it will treat you well. It’s beneficial to take care of the land because in the long run, it’s going to end up being beneficial to you as far as yields and better proven practices go.

Do you hope to keep the farm in your family?
Well, I have two wonderful little girls that would both be very capable of farming, but I don’t know if they will want to farm with their dad. I would love it if they did, but time will tell.
How did you get into farming?
I am a sixth generation farmer. Our farm has been in the family since 1869 when my great-great-great grandparents settled near Cylinder. I was one of those kids whose babysitter was the tractor cab growing up. I’ve always enjoyed farming and knew that I wanted to carry on our family’s legacy when it became apparent I was the only child that was interested. I came on full-time in 2010 after college and then my involvement really increased in 2016 when my Dad passed away.

Tell us your experience with Iowa Select Farms’ manure
We receive manure from multiple Iowa Select Farms’ farms in our area. A relationship that goes back as far as I can remember. Dad used to joke, “Don’t ever turn it down, or you’ll never get it back,” because farmers know how beneficial it can be for their operation.

What is the value of manure in your operation?
We’ve found that, overall, hog manure is a much more effective option for our crop ground. The manure infiltrates the soil better than commercial fertilizer, making organic matter and micronutrients more available to the plant come springtime, which ultimately leads to a better yield. And of course, there’s substantial cost benefits. Manure is much cheaper.

Are you involved with the Manure Management Plans (MMPs)?
We work closely with Iowa Select Farms and a local crop management company prior to harvest to determine if the manure will be applied on corn stalks or bean stubble. Then, we decide what rates the manure will be applied and where. We’re involved, but we leave the MMPs to the experts.

What is like to work with the Iowa Select Farms Environmental Services Team?
Ethan Dahlhauser, our contact, is great. I know that I can call him day, night or on the weekends. He always answers with a positive tone and is ready to help. He comes from a family farm and understands that the fall can be a stressful time, so he communicates as much as he can with us quickly, knowing that our phone is probably ringing all day.

Let’s talk neighbor relations
I farm in a close-knit community where nearly everyone is involved in and supports agriculture. But, we do try to follow manure as quickly as we can with deep tillage equipment to dilute the smell for the surrounding area. That can often mean working through the night, 24 hours a day.

What additional steps are you taking on your farm to protect water quality?
We use 120-feet wide filter strips to act as a buffer between our land and any nearby water source. We use the 4R Strategy—right time, right place, right amount, right rate—to reduce erosion and runoff. I like to think that every time we’re in the field we’re thinking about the environment and how we can be the best stewards—that’s always at the forefront.

As a farmer, why is it important for you to be a good steward of the land?
Farmers rely on soil health and fertility of the land to produce better yields in their crop. Being good stewards of the land correlates with higher yields, which is the ultimate goal. I’m well aware that one of the main reasons I’m able to farm is because my Dad and grandparents took great care to build and maintain the health of the soil and I ultimately hope to pass the farm onto future generations someday, too.