

# THE QUARTERLY KERNEL



Summer 2017

## Put it where the Sun "does" shine

JCS is now using the sun to produce more than just corn. Our latest project involves generating electricity with solar panels. We are working with Rabe Hardware to build five separate solar systems that will have a combined generating capacity of 190 kilowatts. This is enough to completely meet the needs of our office/shop, five irrigation pivots, four hog finishers, and both of our families homes.

Jake Rabe, who installed the geothermal system in our office/shop in 2011, brought us an intriguing opportunity which resulted in our signing up with MidAmerican

old rules which place no limit on how long we can bank kilowatts (as opposed to a limit of a one-month rollover under the new rules). Since a lot of our use is seasonal, this unlimited rollover makes the difference between a "no brainer" opportunity and a questionable one. Our irrigation is seasonal as well as cyclical, only needed 3 months out of the year,



and in some years we use it very little. While I find it hard to understand how MidAmerican's attorneys ever allowed a liability to be put on their balance sheet with no way to

same as our current MidAmerican charges. Because we are trading kilowatts, future cost increases will have no impact on us.

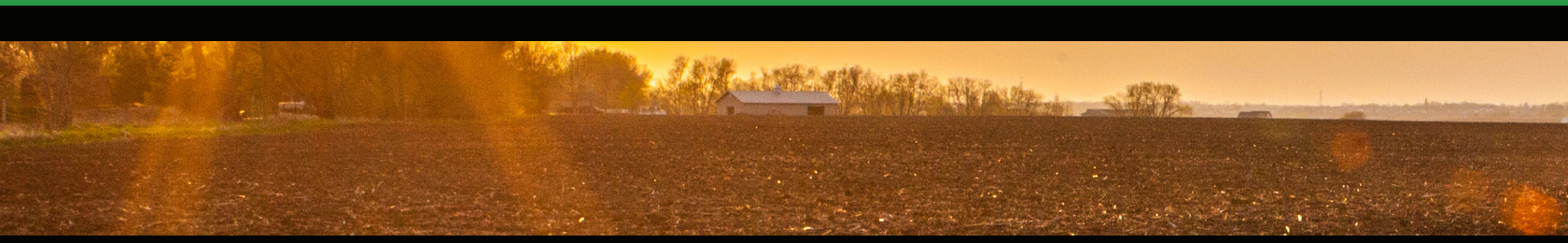
In addition to giving our business a competitive economic advantage well into the future, there are also obvious environmental benefits. Our office/shop, which already uses geothermal for both heating and cooling, now uses 100% renewable solar power for all its energy needs. Our irrigation system, which uses an 18-acre pond recharged by recaptured tile drainage and surface runoff, now uses 100% solar energy to pump that water back over 475 acres.

We would be happy to show you these systems and answer any questions you may have. As I get older, I continue to be amazed at the opportunities presented by new technology, and I am excited to think of what my grandchildren will experience in their lifetime. Without getting too political, I am convinced that, despite all the media's negativity day after day, we still live



Energy for a very attractive solar program. Under this program, when our systems are producing more kilowatts than we are using, the excess energy flows back into MidAmerican's grid through a meter and are "banked" for our future needs. Although this program was changed within one week of our application, we were grandfathered in under the

control it, I certainly won't lose any sleep feeling bad for the monopoly that has been approved to raise our rates 21% over the next three years or the fact that we will never send them another payment on these accounts! The systems are designed to last 40 years, and the payback will be in less than 10 years with the annual purchase costs being the



## Des Moines Water Works

By Rob Sladek

Everyone seems to be talking about the Des Moines Water Works and their lawsuit. It was hard to live in the state of Iowa this past year and not get involved in a weekly conversation about the water works department from our state's largest municipality suing three counties for high nitrate levels in the Raccoon River. This highly publicized lawsuit even got coverage in the Wall Street Journal, but I guess it's not often that a public works department sues counties over responsibility of nutrient runoff.

The Des Moines Water Works is having to spend an increasingly significant amount of money to remove nitrates from their water to ensure it is safe for consumption. They feel that this additional cost should be shouldered by the counties, and their farmers, for being the source of this surplus nitrate runoff in the Raccoon River which supplies over 500,000 central Iowans with drinking water.

As you can imagine, both parties involved in this lawsuit had no shortage of financial backers with shared interests pouring money into advertising and donations to either establish a precedent or keep one from being set. Clearly, this is not just a Des Moines Water Works problem or something specifically that those 3 counties are doing nefariously, this is a production agriculture issue.

Nitrates, while bad in drinking water, are extremely important to a successful corn crop. One reason why such good corn is grown across the Midwest is the availability of nitrates in our soil

completely organically. According to Iowa State University professors Matt Helmers and Michael Castellano, an acre of Iowa farm ground has about 10,000 lbs. of nitrates within it. We will typically apply around 200 lbs. of nitrogen during the growing season to a field of corn which works out to be about 2% of the nitrates in that acre. On average, an acre of Iowa farm ground will lose 30 lbs. of nitrogen a year.

Much of this nutrient runoff into the water supply has been blamed on field tile. These tiles give an unabated passage of field water to streams, waterways, and rivers. While a study showed a 3.2% increase in nitrate runoff when field tile was used as compared to a nontiled field, the additional benefits of tile cannot be entirely written off either. In this same study, field surface runoff and soil losses were both lowered by 17% when a field becomes tiled. The other macronutrients needed for a good corn crop, phosphorus and potassium, had losses reduced by 48% and 22% respectively. Of everything applied to a field during its growing cycle, fertilizer and pesticides, nitrogen is the only one that moves so freely in the soil that losses increased with tile's presence. It seems a bit of a double-edged sword because if you don't tile to keep 3.2% more nitrates in the field, then you lose more phosphorus and other nutrients that are also contributing to things like the hypoxic zone in the Gulf of Mexico.

There is good news however, the levels of nitrates in the waterways of

Iowa are improving. Recently Keith Schilling, a research scientist at the Iowa Geological Survey at the University of Iowa found that 95% of the sites tested on the Raccoon River's tributaries had nitrates levels that declined from 1999 to 2014.

As for now, this lawsuit saga is temporarily done. In March, a federal judge dismissed the Des Moines Water Works' lawsuit, but not before millions of dollars was spent. He determined that water quality issues such as these are a problem for the Iowa legislature to resolve. The Raccoon River is owned by the State of Iowa and he ruled that the three counties did not "unconstitutionally deprive the Des Moines Water Works of any property." While the court system has decided that this case of nitrate runoff isn't going to be solely blamed on three counties and their farmers, nutrient runoff is still no less of a concern for us.

Of our input costs involved in producing a crop, nitrogen is the second largest expense we have. I do not know any farmer that is wantonly trying to put his nitrogen into the drinking water of fellow Iowans. Luckily for all involved, we have a mutual goal of keeping the nitrogen in the field where it can be utilized to produce higher yields. With constantly changing technologies and a better understanding of the problem at hand, the farming industry and the public can work together to find solutions that are economical and fact based.



## Sladek Family Update

For those who may not know our family intimately. Jim and Cathy with son and daughter in law Rob and Carrie are actively farming in JCS. Their daughter and son in law (Ann and Gabe Young) are veterinarians in Weatherford, TX; just west of Dallas.

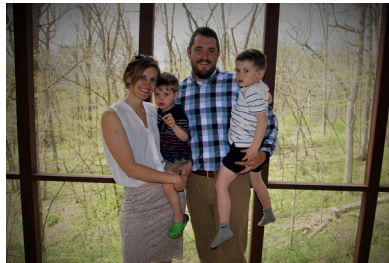
Jim is our General Manager and he handles financials, capital asset management and long term strategies for our farm. He tries to make sure we have the right people in place to help us to be successful.

Cathy is back in the office part-time, she is handling accounts payable and landowner relations.

Rob is in charge of both crop technology and what we use in the office. He also handles our spray operations and manages our agronomy plan for each of the fields we farm.

Carrie handles our HR which also includes payroll, sales/grain deliveries and crop insurance/reporting.

Rob and Carrie have two boys; James (Almost 5, August) and Lane (2, January). James will be in Pre K this fall at LoneTree and just finished his first season of t-ball. Lane attends daycare in Iowa City



and loves riding on the equipment with dad and grandpa!

Ann and Gabe have 2 boys (Levi 4, January & Luke 2, April) and a girl (Lila 2, April). They are expecting number 4, a little boy this August!



Levi is enjoying riding horses and starting to do rodeo. He has gotten to mutten bust a couple times this spring and really enjoyed it!

Jim will be taking a couple trips fishing but he has also enjoyed taking the boys to the pond to fish.

Cathy is enjoying her summer gardening, swimming, working at the farm and spending time with



her grandchildren both here and in Texas!

We welcome you out to the farm anytime to discuss questions you may have or get to know us and what we do a little better.



*Save the Date for our Landowner  
Appreciation Event!  
Evening of Friday September 8th!*



# Notes from the Old Cob...

## Mother Nature didn't ask my opinion....

It isn't possible to watch TV, listen to the radio, or even look at Facebook these days without being bombarded with information about climate change. While trying not to venture into the politics of the issue, I do know for a fact the earth's climate has always changed and will probably continue to do so. My job isn't to try and stop Mother Nature's change, but rather to build a plan that works with the cards she deals us each growing season – a plan that will help us to be successful.

The one seemingly constant trend in the weather lately has been the extreme swings we experience in both temperature and precipitation. This past spring was no exception here in Eastern Iowa. In February, 80+mph wind caused serious damage to our grain dryer. One week later, large hail damaged every roof and all vehicles at our home site. Then, in late April, we had major seed companies tell us to literally "stop planting" 24 hours ahead of a record cold and

wet forecast. Next, we saw near 100- degree heat in early June. So, you may be asking yourself, "How do these extremes in weather impact a farming operation like JCS and what can be done about it?" One of the biggest impacts has been that our "planting window," the three-week period of 100% yield potential, continues to shrink every year. Planting within this window is one of the best predictors of high yields, so we have continued to add planting capacity to our operation every year.

Our 2017 planting season started a little late - on April 22nd - and we were able to plant almost 50% of our corn and bean acres by April 26th. Then, cold and wet weather kept us out of our fields for the next 8 days – the days considered prime time for planting corn here in Eastern Iowa. We were all starting to get nervous as we watched the days of April click by on the calendar, but then Mother



Nature cooperated by giving us another stretch of dry weather which allowed us to complete both corn and bean planting on May 15th. Our goal is to plant all our acres in 10 working days, which was all we were given this year, and we succeeded. Achieving that goal is made even more challenging by the fact that, in addition to Mother Nature's unpredictability, our operation is now spread out over 8 counties.....but that's a logistics topic for another day.

**-Jim Sladek**



**5/23/2017**  
**4 weeks after planting**



**6/7/2017**  
**6 weeks after planting**



**7/5/2017**  
**10 weeks after planting**