



Installing a "Bio-Reactor" for water management



### **"Your Farmland Specialists"**

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#### **Latest Farmland Value Trends**

The Chicago Federal Reserve recently released their 4th Quarter 2017 AgLetter. They reported a year-over-year 1% increase in "good" farmland values across the 7th District (including IL, IN, IA, WI and MI). However, Illinois reported a 1% decline in values; with IN, IA and WI all gaining 2-3% for 2017. Further, northern Illinois reported a 3% decline, while central Illinois reported a 1% increase.

Prior to this slight increase in "good" farmland values, the District has reported 3 consecutive years of value declines since the high in 2013. This avoided exceeding the three consecutive years of declines during the 1984-86 time period.

The District also reported the value changes in real terms, adjusted for inflation. In real terms, the District experienced an annual decrease of 1% during 2017. This was the fourth annual real decline in a row. Comparing to the 80's again, when the District had seven consecutive years of real declines. Overall, in real terms there has been a 10% correction in District farmland values since 2013.

#### **Shameless Plug for my Alma Mater:**

Two projects I recently noted from Purdue University:

1. Progeny Drone. A startup affiliated with Purdue, has created software that can quickly convert aerial crop data into useful information.

As we know, drone videos create huge amounts of data in a short time. The challenge is then to convert that data into actionable information. This company has reportedly reduced the computing required to a laptop-size project for quick turnaround.

2. Conveyors in research greenhouses. Researchers have installed an automated conveyor system in a greenhouse, to keep plants moving constantly. This will reduce or eliminate the effects of multiple 'micro-climates' that occur due to moisture, temperature, air flow, etc.

This would eliminate much of the data variances "noise" of data collected. In turn, it will greatly speed up the plant breeding process due to accurate data.

Two examples of how agriculture is moving into the era of 'digital agriculture.'

#### **Ag Credit Conditions**

The Chicago Federal Reserve also reported Ag Credit conditions deteriorated again in Q4 '17. Repayment rates on non-real-estate loans were lower, and demand for loans was higher.

Nearly one-half of all respondents reported both lower repayment rates and higher demand for loan renewals and extensions.

Additionally, the share of the District's farm loan portfolio deemed to have "major" or "severe" repayment problems edged up to 6.1%, the highest since the early 2000's.

Their conclusion is that challenging times are still facing agriculture. One Iowa respondent reported that "several area banks are putting pressure on producers with tight margins to either sell land or refinance with another bank."

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## **Drainage Water Management**

**A recent issue of *Successful Farming* magazine had an interesting article on Drainage Water Management. The article sites work being done by Jane Frankenberger, Purdue University; and Charlie Schafer, of Agri-Drain Corp in IA.**

**I had the privilege of consulting with Charlie Schafer on a large drainage project we conducted in Ohio. That project included the installation of two of the latest water management tools—a bio-reactor and a saturated buffer.**

**The picture on page 1 is of one of the bio-reactors as it is ready to be filled with wood chips. The drainage water within the watershed was directed into the bio-reactor top-end, outletting into an open ditch on the low-end. As it filters through the wood chips, nitrates attach to the carbon in wood chips to reduce the nitrate levels entering the creek.**

**The saturated buffer consists of drainage pipe laterals running parallel to the ditch outlet. The drainage water is ‘forced’ through the laterals and adjoining soils, to naturally filter nitrates from the water prior to entering the creek outlet.**

**Charlie has developed water-control structures to control the timing of water flowing into the outlets. During peak spring flow the water level is lowered to allow for full drainage. However, in mid-summer months, the water level is raised to keep water in the field tile for improved yields. Test results have been encouraging. Holding water in the soil profile with the structures has increased yields 10-20% in some cases.**

**All of these tools should be considered when developing a farm drainage plan. They can reduce nitrate levels entering our creeks; and they can increase yields during short-term droughts. Drainage projects should now be viewed as ‘total water management’ plans in order to solve runoff issues, utilize water efficiently and possibly improve yields.**

**Call us if you are considering a drainage project. We will be glad to consult with you and bring our experience and expertise; plus connections to the right contractors and suppliers.**

## **“LIFE ON THE FARM”**

**By Craig D. Mann**

Some of you are too young to remember the days when baling and corn shelling jobs were plentiful. The phone used to ring frequently at our house those summer evenings, and generally speaking, my three boys had a job the next day.

Preceding those times, I can remember when I was a youth, working all summer with the “East Plattville Baling Company”, where five neighbors took turns helping one another put up hay (now days the IRS would roll their eyes trying to figure out that business arrangement). The lunches at three o’clock in the afternoon were tremendous, and the friendly interaction was even greater. If there was rain in the forecast, we would work late to finish the job. Basically, we had each other’s backs.

Things have changed somewhat and that sense of caring and community does not prevail like it used to. Proverbs 18:24 concludes with “....but there is a friend who sticks closer than a brother.” I am grateful to have a few friends that fit that description. Mark 12:31 tells us that the second greatest commandment is: “Love your neighbor as yourself”. Oops, I could stand to clean up my act a little bit. How about you?