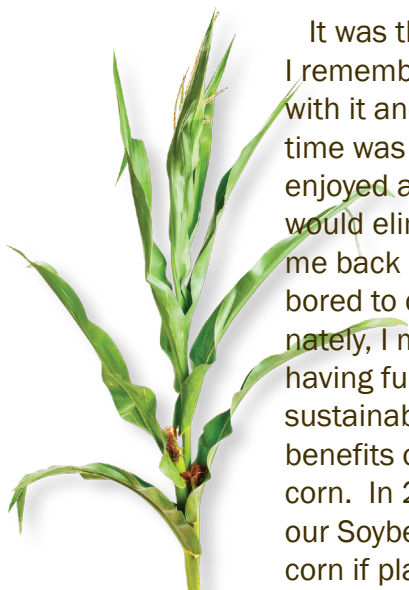




AG NEWSLETTER

THE BENEFITS OF NO-TILL FARMING



It was the late 90's that I first heard about Strip Till. I remember personally not wanting anything to do with it and for good reason. My main job at planting time was to work ground ahead of the planter. A job I enjoyed as much or more than anyone else. Strip Till would eliminate my plush tractor driving job and put me back in the pick-up truck as dad's seed tender, bored to death and counting the minutes. Fortunately, I matured from my twenties, focused on having fun to my thirties, focused on profitability and sustainability. I could no longer look past all the benefits of strip tilled corn, and especially, corn on corn. In 2004 we were already no-tilling about half our Soybeans and would no-till some of our first-year corn if planting conditions were just right for it.

Our transition year was 2005, that spring we field cultivated the fields going to corn for the last time. That gave us a blank canvas to lay our rows out with RTK GPS. I chose an autosteer system that could do boundary-based guidance not just straight lines. This technology allows your planter, sprayer, side dress bar, combine, etc. to swath based on where the field edge is by the width of your current implement. It makes managing guidelines in a particular field a lot easier and cleaner. Guidelines are very critical because I'm always planting dead center between last year's rows or planting on Strips made the previous fall. I have two guidelines saved for every A B line needed. They are fifteen inches apart and labeled as "Odd" or "Even". Crop years ending in an even number use the "Even" swath and vice versa. This system of labeling helps put the row where it belongs, year to year with less errors in between. Some of my fields are still using the guidelines mapped in 2005. *(cont. pg. 2)*

MARCH 2020

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FSB LOCATIONS

301 W. Falcon, Flanagan
403 State, Benson
2401 E. Washington,
Bloomington
111 N. Fayette, El Paso
500 S. Persimmon, Le Roy
208 E. Gridley, Gridley

THE BENEFITS OF NO-TILL FARMING (CONT)

Over the last 15 years we have made many adjustments to our Strip-till, No-till system. First year Corn I find I can average around 10% better an acre with strip-till done in the fall vs. my No-till corn. Over the last 15 years I have seen my Strip-till and No-till produce the same yield when compared on a level playing field, but I can't say that my No-till has ever beat my Strip-till in a fair comparison. Typically, No-till corn is my contingency plan for a short fall when I can't get all the Strip tilling done. I have no-tilled corn on corn before successfully quite a few times as well but a higher risk. The beauty with strip till is your seed zone resembles being fall plowed free of all fresh toxic plant residue. It aerates, mixes and boils the soil at least nine inches deep in the row leaving it about four inches higher than the dirt surface between the row where all the previous year's crop residue is. By spring, the strips will have settled to about one inch higher than the surface between the rows.

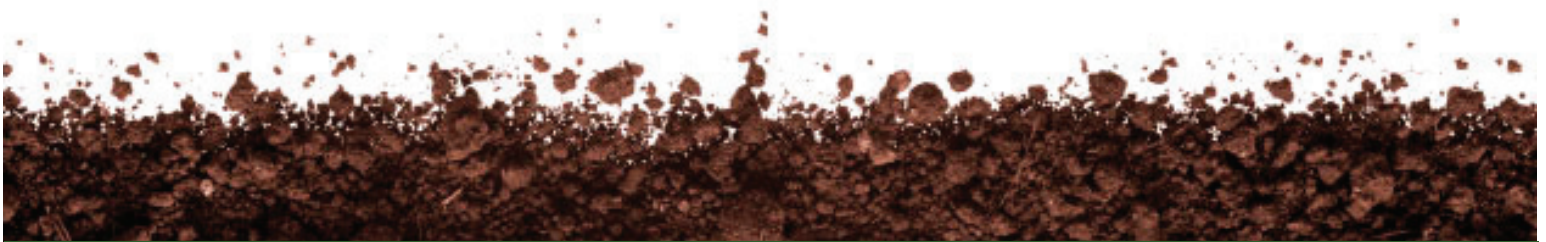
Soybeans on the other hand, I have not personally seen enough positive yield advantage to Strip-till. I have tried numerous times, but the results are always inconclusive. I will say with soybeans grown in strips alongside no-till planted soybeans, the strip-tilled soybeans will grow faster and develop a dark green color faster, but the color will catch up in a few days on the no-tilled soybeans. The height will even up too and by August, they are all the same height. In my experience though, yield evens up too. So why waste the fuel and open the ground up to any kind of erosion. Although I know of growers that feel they can get a positive response from Strip-tilling Soybeans so the jury may still be out.

At the start our no-till journey, and I say Journey because successful no-till doesn't happen overnight, we were mostly focused on the money

savings. Along the way I saw firsthand all the other benefits no-till has. Everyone first thinks of no-till for being good at controlling erosion, but no-till will also let rain soak in faster. Tillage will smear and plug the natural pathways that earthworms make down deep besides slaughtering the worms themselves. Even Strip-tilling in long term no-till will disgust me with how much worm meat I find stuck to the shanks, but here again, it's a fraction of what you would find with full tillage.

Another huge advantage of no-till is soil structure, especially in a fall like the fall of 2019. Soil structure shouldn't be mistaken for soil compaction. If you don't know the difference, just carefully dig up some corn plants and examine their roots. Good soil structure will not hinder root development, but compaction will. Good soil structure can hold up weight unlike soil with destroyed structure, it will pack and compress or just ooze out from under tire.

Weed pressure, types, and timing differences in No-till are to be considered as well. Round-up made no-till weed control idiot-proof. Those days are long gone for everyone not just for no-tillers. The strategy is similar, first stop it from ever starting with a strong pre-emerge program and be prepared to add some level of burndown. Strong infestations of winter annuals need to be dealt with in the previous fall otherwise you will struggle to control them. Long term no-till's weed pressure will become more sporadic. Without tillage spreading and planting weed seeds. Our post chemical application is very similar to a conventional post application. I do like to throw a fungicide in with the post chemical application. This helps with the extra inoculum in the surface residue and has in many cases, prevented us from having to spray fungicide in corn at VT. (*cont. pg. 3*)



THE BENEFITS OF NO-TILL FARMING (CONT)

I would encourage everyone to take a hard look at no-till. I will also caution everyone to do their homework. Planter attachments alone can make or break no-till in certain weather or soil conditions. Personally, and I'm not alone, have yet to find a planter of any color that is dialed in to no-till from the factory the way that we would set it up for our soils. They offer systems that may work, but I want something that thrives in no-till, strip-till. Every single component on my planter was researched heavily. I would challenge anyone to build a better no-till planter than mine because if someone does, I'm going to incorporate their good ideas as well back into mine.

No-till is not a silver bullet by any means. It is more challenging than doing full tillage. It also separates the men from the boys. No-till will not allow you to pay overpriced rents, it will not make up for poor management or marketing. No-till is a cropping system that when implemented correctly

can perform just as, or more profitable than tillage but the long term is where the real dividends of no till are realized. I have neighbors that humor me by asking "if I'm ready to start doing tillage again"? My reply is "It's very hard to consider once you have seen the light".

My research and experience over the past 15 years showed me two things, that both Strip-till and no-till systems can definitely compete with full-tillage systems yield wise. The other is that mother nature has more to do with final yield than any tillage practice and I believe we can all agree that 2019 can attest to that. The one thing I do have after fifteen years of conservation tillage that I bet my neighbors in full tillage still do not have, are any fields at or above 5% organic matter.

Greg Arlen Ruestman
No-Till and Strip-Till Farmer
Toluca, Illinois

ORGANIC MATTER TABLE

Table 2: Value of Soil Organic Matter	
Assumptions: 2,000,000 pounds soil in top 6 inches	
Nutrients	1% organic matter = 20,000# 50% Carbon, C:N ratio = 10:1
Nitrogen:	$1000\# * \$0.50/\#N = \500
Phosphorus:	$100\# * \$0.70/\#P = \70
Potassium:	$100\# * \$0.40/\#K = \40
Sulfur:	$100\# * \$0.50/\#S = \50
Carbon:	$10,000\# \text{ or } 5 \text{ ton} * \$4/\text{Ton} = \$20$
Value of 1% SOM Nutrients/Acre	= \$680
Relative Ratio of Nutrients:	100 Carbon/10 Nitrogen/ 1 Phosphorus/1 Potassium/1 Sulfur

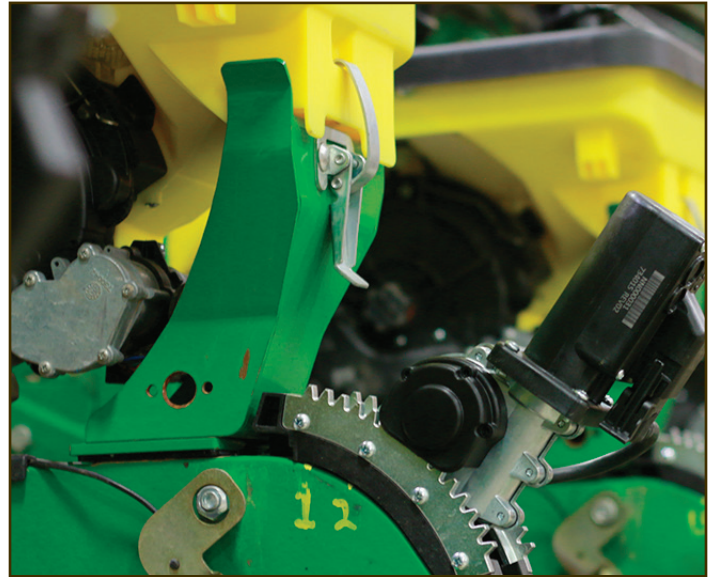
<https://ohioline.osu.edu/factsheet/SAG-16>

Precision Planting offers growers the opportunity to increase their yield while cutting back on operating costs. Precision based agriculture is becoming the benchmark for today's farms. Precision Planting leads the pack in innovation and technology. Precision Planting looks at every part of the planter because planting is the most important part of a grower's season. We start in the cab; it is important to be able to monitor your planter from the cab. We want to know what is happening while you're on the move in the field.

With a 20/20 monitor, you can watch your population, singulation, SRI, down force, and much more. You can hook your iPad up to the 20/20 monitor and store all your data into Climate Fieldview. Which allows you to make field maps for all your farms and keep track throughout the seasons. Once we are watching on the monitor, we can discuss what could make your operation more successful. For example, we could find that there is too much or not enough down force on the planter. This could cause compaction or seed misplacement. This gives us the opportunity to add DeltaForce, an automated down force system that can change on the go.

By using DeltaForce, we know that the optimum amount of down force is always being applied. Saving money by better seed placement and less compaction in the furrow. This is just one example of how Precision Planting can save an operation money. The opportunities for your planter are endless with precision planting. With Smartfirmer, we are able to see organic matter, furrow moisture, and temperature. From there we can add Smart depth, which will adjust the depth of your planter to always find moisture, giving us even and consistent emergence. Add speed tubes with a Vset meter and you can do all of this planting at 10+ Mph. We can even adjust your fertilizer and nutrient management plans.

With Conceal we are able to place nitrogen where the plant needs it and when the plant needs it.



Conceal places a band of nitrogen inches from the plant, during the growth stages that it needs it most. Furrow jet is a in furrow and banding starter fertilizer tool. With one attachment going in the middle of the furrow and one 3/4 of an inch on either side, your guaranteed to get your plant the fertilizer it needs for early development.

Precision planting is constantly doing more testing and more plots to continue to produce new and better technology. One of the most effective and innovative research farms is just around the corner in Pontiac, Illinois. The Pontiac technology institute (PTI) farm is working year-round to find new and better ways to increase your yield. If you want to see Precisions technology at work join agronomist Jason Webster on one of his plot days this summer. Any questions regarding precision products and more about how they can help your farm, reach out to us at Flanagan Implement.

Jared Rients
Sales Agronomist
Flanagan Implement

FLANAGAN
Implement

TAKE ADVANTAGE OF TECHNOLOGY THAT FITS YOUR FARM

After 2019, which was a tough year for most, if not all, farmers in central Illinois and the rest of the Midwest, we are telling our farmers to step back from their operation and take a good look at where you are making money and where you are not making money. Each farming operation is different than the next and one thing, such as no-till or strip-till farming, may make your operation money, but it may not help your neighbors' operation out. So, at Flanagan State Bank we sit down with each of our farming operations at the beginning of each year to see what worked for their farm and what didn't. If something needs to change, we work together to come up with a plan and figure a way to implement that plan.

January was a very big month for Agriculture, in general, with trade deals and prices starting to climb, but also the amount of changes coming in the near future for Ag. We have seen technology change farming drastically in the past 10 years. We have heard from some farmers who have been in the business for many years that the number of screens in a planting tractor is now overwhelming. This January I had the opportunity to go to a Precision Planting meeting over at the Tremont, IL facility and it was very informative for me, not only as an Ag Banker, but as a 4th generational farmer.

We need to figure out what is making us money and what isn't, but also, we need to figure out where we can cut costs. I am in a position that not every young farmer gets, where I get to see both sides of the coin. I get to see what a bank wants to see and how we look at the operation differently than the farmer. I, personally, have the opportunity to help our family operation by giving my input on some things and in areas that we see help different farmers, that bank with us, make more money for their operation.

Just like with every decision made in a farm operation you have to see the costs today, but also you have to see the benefit added to your operation



in the future. It does not make sense for our farm to add all the technology available to the operation at one time. This is usually a slow process adding different upgrades each year or every other year so that you don't deplete your working cash. I mean it was the same way with GPS a few years back. The only thing that had it was the planter tractor so that we could keep rows straight and it would make it easier to combine. Now, everything has it on it. It makes it easier to complete the task at hand, but also allows you to focus more on what exactly is happening behind you.

All in all, technology in Ag is not something that needs to scare farmers today. There are MANY benefits to the products that are out there. We encourage you to do some research and go to all of the meetings offered for a product because more than not there is someone else there with the same question as you. Once the research is done take a step back and see if it will work for YOUR operation and then see if it is worth the price. See if you can add it right away or maybe is it something you can get by this year without but throw it in the cash flow for next year. Don't be afraid of change, take it in stride.

Logan Weber
Junior Loan Officer
Flanagan State Bank



UNDERSTANDING DICAMBA, 2,4-D, & GLUFOSINATE IN 2020

With the 2020 planting season upon us, weed control strategies will take on extreme importance, coming off a 2019 growing season in which we saw record levels of prevent plant acres across much of Illinois. With many unplanted 2019 corn acres expected to shift back to soybeans this year, and differing soybean weed management systems in the countryside, it will be key to understand the strengths and weaknesses of the soybean platform that individual growers have selected to plant. With the numerous weed management challenges we face, from resistance issues to restricted use applications, it is important to understand that there will be no short-cuts in 2020 and that a fully integrated system will be the key to success.

Three primary chemistries that will serve as focal points in most soybean systems this year are dicamba, 2,4-D, and glufosinate. I wanted to take a minute to address some of the main points about each of these herbicides.

To begin with, dicamba has certainly gotten its fair share of publicity the past few years. The one thing that has not been disputed has been just how effectively it has controlled problematic weeds (waterhemp, marestail) during the dog days of summer. Dicamba can be one of the most effective weed control options throughout the season when used according to label restrictions. As we move forward, it will be extremely important to current and future soybean traits as it is one of only two herbicides without current, known resistance issues (along with glufosinate). Dicamba will work most effectively when used in combination with additional residual herbicides, such as a strong Group 15 herbicide if resistance is not an issue. Dicamba will provide excellent results when conditions are drier, with 14 days of soil activity, but as a safety net, many common residual herbicides will take water to activate and be more effective under wetter conditions. With a June 20th cutoff date and 85-degree temperature restriction looming this summer in Illinois, dicamba applications should really be focused around planting or as an early-post application. The greatest weed control in a dicamba system will come from spraying bare ground and preventing problem weeds from ever getting started.

As for 2,4-D, the conversation about application is very similar to dicamba. With a key difference being

very limited soil activity, 2,4-D applications really need to be used in combination with additional residual herbicides. Applications should have the “See weed, spray weed” mentality, which can accelerate challenges with weed resistance if the “3 inch” weeds that 2,4-D is applied to are actually 3 feet tall. This will serve as a post-emerge option, that needs to be heavily reliant on residual herbicides to carry season long weed control. While not a restricted use pesticide, it is important to consult any labels prior to application due to many restrictions that resemble dicamba application, including buffer restrictions around sensitive areas, do not spray requirements when a susceptible crop is downwind, and more.

Lastly, glufosinate is an option that works in different ways than the previous growth regulator herbicides but will have limitations as a chemistry that is built for emerged weeds only. Much like 2,4-D, glufosinate will require an effective residual tank mix option to carry season long control. Once again, target 3” weed height or less for effective control of emerged weeds. Keep in mind, glufosinate will have an R1 growth stage cutoff, as any application applied as a late or rescue treatment can have a negative yield impact by reducing vital flowers/pods. Remember, coverage is key, as spray volumes may need to run at 20 gal/acre with denser canopies and target warm, humid conditions for more successful weed control.

All three of these herbicides require planning and an integrated approach for effective weed control throughout the season. As we look to the future, dicamba, 2,4-D and glufosinate will be critical pieces of future soybean weed management systems and we need to practice proper stewardship and application to ensure longevity of these technologies. When in doubt, always read the specific product label of the herbicide that you are applying or reach out to a representative with specific questions. The best advice I can give is to approach 2020 with a well-rounded plan, and don’t let the challenges that mother nature may throw at us this Spring deter you from it. I hope everyone has a safe and successful 2020 growing season!

Robert Clark, CCA
Technical Agronomist
Stone Seed



It is March already, and many producers hope to have planters rolling sooner than they did in 2019. Inputs are likely already locked in and for many, they have been paid for. This would mean that you should have a good handle already on what your overall costs are for the 2020 crop. Yield is still up in the air, but you likely have an average you can work with and, in doing so, you have a good idea what you need to get for a price to cover your costs.



So, what is the outlook for grain prices as we go forward? Well, there are so many things that go into determining the price, that predicting where it will go is impossible. However, the industry will make assumptions, and then make changes as events unfold before harvest, and after harvest. We will get the Prospective Planting Report on March 31st. This will give us our first official look at corn and soybeans acres for 2020. Estimates so far indicate 94 million acres of corn for 2020. If we assume we have a trendline yield, you still have corn ending stocks at or above 2.5 billion. This is simply too much corn. The current ending stocks figure for the 2019 crop is hovering 1.9 billion for reference. As you can see, the outlook

today is not great. Again, many things can, and likely will, change. The outlook likely wasn't that great last year, but we saw a very wet spring, and corn rallied \$1.00/bu (and then dropped over \$1.00/bu). That being said, without something to affect supply or demand, we likely have too much corn to deal with by harvest. Look for opportunities to manage your risk. You can make sales and buy call options to get you through the growing season, and/or you can buy put options to get a floor under the bushels you are not willing to sell. Create a plan now that gives you flexibility to handle whatever the market gives you. If your marketing plan has flexibility, you won't be scared to execute your plan if we see volatility come into the market.

For soybeans, with current acreage estimates and a trendline yield, ending stocks would increase to 590 million, from the current estimate near 425 million. Chinese demand, and weather, will be factors in determining if we are close to these numbers or not. Like corn, you want to remain flexible to handle what the market gives you. Look to manage your risk by locking in floors with put options on the bushels you are not willing to sell. If you are more of an aggressive seller, continue being an aggressive seller, but look at ways to stay in the market in case we do see demand pick up.

When looking at 2020, I don't think you can forget about 2021 either. If we do grow a big crop in 2020, we likely won't see current 2021 prices stick around. You should look at locking in 2021 floors, and you should look at getting started making 2021 sales. Every year is different, but I have seen many times where the best marketing opportunities for a crop come a full year before you even plant that crop.

Kent Stutzman

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