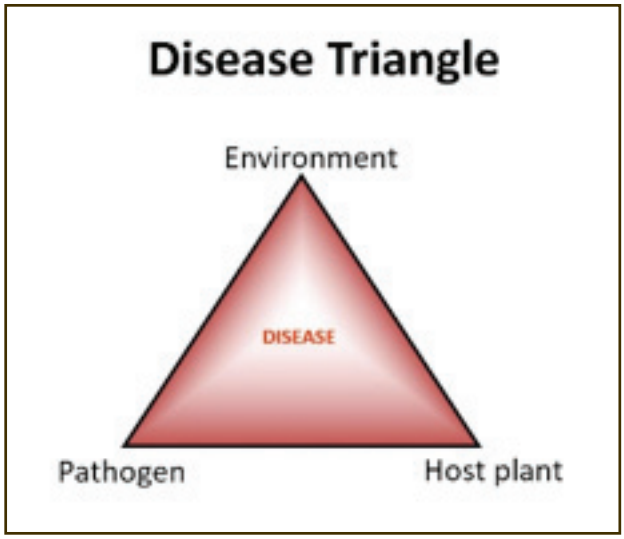
Flanagan State Bank

AG Newsletter

Plant Disease & Fungicide use

What does 2020 look like as far as plant disease and fungicide use? That is a question we come up against every year and one that is not easily answered. The thing to remember is that for a plant disease to prosper in your fields three things need to be present, the right environment for growth, the pathogen that creates the disease, and a plant that is susceptible to the disease. The term used to describe this dynamic is the disease triangle.



Our soils contain the ***pathogens*** that can cause the plant diseases, these pathogens hang around from year to year on the residue from previous crops. When we make our seed buying decisions we can look for a ***plant*** that has strong defensive ability against most plant diseases however in many cases the most defensive corn hybrid or soybean variety may not be the highest yielding choice we can make. The most difficult part of the triangle to predict from year to year is the ***environment.*** Weather forecasters have a difficult time telling us what the weather will do 3 days out, let alone 2 weeks or more. For most diseases to spread quickly they need a warm and damp environment. *(cont pg. 2)*

July 2020

In This Issue

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 easy answer many have tried to use is to decide to wait and see what the weather conditions look like and scout their fields when the disease outbreaks normally occur, for corn that is just prior to V12 through R3, for soybeans around R2. The problem is that when you can see the disease breaking out on the plant, damage is already being done and yield is being affected. Also, under the right environment disease can spread very quickly and getting a fungicide applied in a timely manner may be difficult if all your neighbors are also in line for an application. There are limited numbers of planes and custom applicators available unless you own one yourself.

For many growers a planned application of fungicides has become the standard, part of the reason for this is that over the years we have found benefits from the use of strobilurin fungicides in addition to controlling plant diseases. This class of fungicide reduces stress in the plant by reducing the production of ethylene gas in the plant. The reduction of ethylene slows the maturity of the plant allowing for increased nutrient efficiency in the plant thus the potential for increased yield. When plants are heavily stressed from weather, disease, or other factors the amount of ethylene gas in the plant rises and speeds up maturity, reducing yield. By working to control ethylene production we maximize potential yield. From research done at Brandt Agronomic Services Research Farms, we have found over the past 14 years an average increase of 22.1 bu. per acre for corn and over the past 12 years a 5.1 bu. increase for soybeans attributed to the application of fungicides.

Regardless of whether you choose to proactively apply a fungicide or wait and scout before applying a fungicide, the need to be out in our fields looking at our growing crops is still important. We can learn a lot by letting our growing crops “talk” to us. How do the plants talk to us you ask?

1) Look at the plant stand, are plants evenly spaced? Maybe we need to fine-tune our planter to achieve a picket fence stand.

2) Are the plants stalks close to the same diameter size? If not look into what caused the difference, did the plants emerge evenly? Are planting depths the same?

3) Dig up the plants and look at the root structure, do the roots drive down at a nice angle, or are they twisted, stunted, or laying parallel at the depth the ground was worked?

We can learn much each year and use that knowledge to increase the success of future crops.

Remember the definition of insanity? ***Doing the same thing over and over expecting a different and better result.***

Good luck and have a safe and profitable 2020!

Dan Froelich
Agronomist
Lexington, IL Location

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Weed Control for corn & Soybeans in 2020

Tall waterhemp & palmer amaranth are weeds of concern for 2020 in the Flanagan, IL area
due to the high numbers of seed produced by each plant left uncontrolled and germination taking place on the soil surface to ½ inch depth the entire growing season each year.

The very important way to control waterhemp is to not let the little weed seedlings emerge by using many overlapping residual pre & post application herbicides. These can come from multiple classes of herbicide chemistry for each crop. Use full, overlapping rates of herbicides in classes of chemistry that control waterhemp and have no resistance. Apply the herbicides on the soil surface for the best control of germinating waterhemp. Providing multiple modes of action against waterhemp & palmer amaranth.

For conventional corn – Bicep II Magnum, Lexar, Lumax, Acuron or Acuron Flexi for the base product applied with water or with nitrogen solution in preplant incorporated or pre-emerge with a nitrogen stabilizer, containing 2 to 3 classes of herbicides for waterhemp residual control.

For no-till corn or fields with emerged waterhemp, apply dicamba, Liberty, or Gramoxone before corn emergence can be added.

Post application on corn – you must know the traits and tolerances before herbicide combinations are applied to:

- **Non-GMO corn** - Acuron Flexi + atrazine or Callisto Xtra (if grass present add Accent Q) + additives required.
- **Roundup corn** - Acuron Flexi + atrazine + Roundup or Halex GT + atrazine or Callisto Xtra + Roundup (but not Dual because this is not encapsulated, causing possible crop injury) + required additives.

Some traited corn is tolerant to Liberty for grass & waterhemp control added to Acuron Flexi or Callisto Xtra but check with the seed dealer. Always try to apply herbicides to small escaped weeds in early post applications having long residual overlapping classes of chemistry.

In the class of herbicides of Dual II Magnum or Dual Magnum (s-metolachlor) has the longest half-life lower labeled use rate compared to Dual (metolachlor) or any other herbicide in this class for longer season residual control. Many herbicide combinations are being applied together that have the potential for crop injury or yield drag given certain weather conditions during the growing season and be certain of the genetic traits of your crop in each corn or soybean field.

For conventional soybeans use – Boundary +Authority pre-emerge in conventional tillage or no-till as the base products.

No-till Soybeans require – 2,4-D or dicamba + Roundup for control of winter annuals present at burndown time. Again, some products contain multiple classes of herbicides.

If waterhemp is present you can add Liberty or Gramoxone pre-emerge on any soybeans before the soybeans crack the ground.

Post application on soybeans, again, it is very important for you to know traits and tolerances of your soybeans, and also your neighbor's soybeans or even other adjacent crops (this even includes building sites), before herbicides are mixed and applied, usually 21 to 28 days after planting.

Here are a few of our suggested ways to controls weeds in your different types of soybean varieties:

- **Non-GMO soybeans** – Prefix or Flexstar + Dual Magnum including Fusilade for volunteer corn or escaped grass if needed + required additives.

- **Roundup soybeans** – Prefix + Roundup or Flexstar GT + Dual Magnum adding Fusilade for volunteer corn

- **Roundup Xtend soybeans** – Tavium + Roundup or Prefix + Roundup+ Xtendimax adding Fusilade if needed +required additives & ALL the training with records needed with the new state of Illinois regulations for 2020 applied by June 20, 2020

- **Liberty Link soybeans** – Prefix + Liberty or Dual Magnum + Liberty adding Fusilade + Cadet (for velvetleaf if present) + required additives

- **Enlist 3 soybeans** – Prefix +Liberty +Enlist 1 (if needed) or Dual Magnum + Liberty + Enlist 1 (if needed) + Fusilade (if needed) + required additives

- **GT 27 soybeans** – Prefix +Liberty + Cadet (if needed) or Dual Magnum + Liberty + Cadet + Fusilade (if needed) + required additives

Remember to apply all post applications when crop and weeds are small, also scout areas where
water stood or flowed for population of the crop and weeds coming. The recommendations listed above have some generic herbicides available, BUT make sure they are the same chemistry and concentration. Try to avoid late-season application of herbicides to clean up a field as it may impact yield potential. And my final piece of advice is:

KEEP GOOD RECORDS OF TRAITS OF CROP IN FIELDS PLANTED TO AVOID INJURING OR KILLING CROP IN YOUR FIELDS.

Danny Brown, CCA
Flanagan Fertilizer
Flanagan, IL

1. Create Inspection Checklist

• Start in late July/Early August about a month before harvest on creating a checklist.
• Getting this list put together early will help you go through the equipment thoroughly and effectively
• Pull equipment out of shed to clean, inspect, and repair – this will make everything easier to see/fix
• Start from the front of the piece of equipment and work your way back.
• If possible, clean equipment up before putting it away in the fall – it will be easier to get ready for the next year.

2. Clean Farm Equipment if Needed

• It is easier to inspect clean equipment and it is easier to find fluid leaks
• Clean up decks, housings, and rakes of any debris.
• While cleaning note any repairs needed.

3. Use a Farm Equipment Inspection Checklist. An Example Would Be:

• Nuts and Bolts – make sure all are tight and secure.
• Tires – check pressure and tread wear – check lug nuts.
• Blades – sharpen and replace as needed.
• Cutter bars/Grain platform/skid plates – check to make sure all of these are secure with no flexibility. Check for wear.
• Mirrors – Make sure they are clean and are in the best position for visibility.
• Fluids – Check and/or change all fluids and filters – Fuel/Hydraulic/Coolant/Oil
• Hitches – Make sure you have the proper pins and keepers for the equipment.
• Brakes – Check and make sure these are working properly.
• Cooling System – Look for cracks and leaks when checking levels.
• Hoses/Belts/Chains/Plastic Parts – Check all belts, rubber hoses, and plastic parts for wear or cracks and replace as needed. Make sure all belts and chains are properly tightened and adjust
• Hydraulic Lines – The best way to test the hydraulic systems is to pressurize them and look for leaks. However, beware that not all leaks will create a telltale puddle.
• Batteries – Does the battery hold a charge? If not, replace.
• Engine and Steering – Making sure the area is clear, start the engine, let fast idle for 3 minutes. Check to make sure if any fuel, air, or oil filters need to be replaced or tightened. Also, ensure steering and exhaust systems are in working order.
• Safety Equipment – Make sure all shields and guards are in place and in good working order.
• Yield Monitors, GPS, and gauges – Adjust and calibrate these tools to ensure they are providing accurate information.
• Document all work done – Keep track of everything done to the equipment – this will help cut repair costs.

4. Do a Final Walk Around

• Check to make sure all lights are in working order – headlights, taillights, and turn signals. Replace as needed.
• Make sure Slow-Moving-Vehicle signs are still reflective and visible from behind vehicle.

5. Reflect on Last Year's Harvest

• Try to think if there was anything that needs to be changed or updated.
• This can be hired personnel, loading/unloading of grain, lunch breaks, start times.
• The goal should be to have a safe and successful harvest.

Checklist Shown on page 5.

Logan Weber
Junior Loan Officer
Flanagan State Bank

HARVEST CHECKLIST

Piece of Equipment _____ **NOTES**

Corn and Bean

- ☐ Cutting Parts – Sections, Bars, and Rivets
- ☐ Sickle – Service and Parts
- ☐ Cylinder – Teeth and Nuts
- ☐ Drapers and Accessories
- ☐ Chopper Belts – Tight and Working Accordingly?
- ☐ Roller Chain, Sprockets, Chain Lube
- ☐ Grease and Grease Gun – Document greased parts

Tractor /Machine

- ☐ Hydraulic Lines – Leaks/Secured
- ☐ Fluids – Oil, Hydraulic, Transmission
- ☐ Engine and Steering – Check cable, fluids
- ☐ Hitches – All pins secured properly
- ☐ Grease and Grease Gun – Document greased parts
- ☐ Plates and Covers – Bolts Tightened and Secure
- ☐ Bearings – Checked and in working order
- ☐ Batteries – Holding Charge?
- ☐ Mirrors – Cleaned and positioned correctly
- ☐ Brakes – Check to make sure working properly
- ☐ Cooling System – Anti-Freeze, hoses, leaks
- ☐ Tires – Check for holes/Pressure/Lug Nuts
- ☐ Yield Monitors/GPS

Safety/Preventative

- ☐ Gauges – Functioning Properly
- ☐ Filters – cabin air filters cleaned?
- ☐ Lights – Flashers, Running Lights, Turn Signals
- ☐ Toolbox – Essential Tools
- ☐ Spare Parts – Parts to Do Quick Fix if Needed
- ☐ Duct Tape – The "Fix All"
- ☐ Cabin Foam – Sealed correctly?
- ☐ Shop/Paper Towels and Glass Cleaner
- ☐ Fire Extinguisher
- ☐ Fuel Transfer Pumps and Nozzles
- ☐ Hand Cleaner
- ☐ Safety Supplies – bandages, gloves, towels
- ☐ **DOCUMENT ANY CHANGES/UPGRADES NEEDED**

IF YOU WOULD LIKE A COPY OF THIS PLEASE REACH OUT TO YOUR LOCAL FSB AG LENDER

Why I chose No-Till/Strip-Till Farming

In Flanagan State Bank's March 2020 Ag Newsletter our cover article was on the Benefits of No-Till Farming. After speaking with our growers, we figured maybe a little background about Greg would be beneficial. He shares his journey into No-Till Farming.

My Father was a numbers man, his accounting ability would leave most bankers in awe. I will never forget what he told me in the fall of 2004. "Greg, we are cannibalizing our equipment line to farm". Being the tech-driven man that I am, those are not the words you want to hear with RTK GPS, swath control, and all the other game-changing technology just starting to come online at the time. The markets at the time wanted corn so we were also changing our crop rotation from a 50/50 corn/soybeans split to a 75/25 corn/soybean rotation. Three years of continuous corn meant even more heavy tillage under a conventional program. A change was needed.

In 2005 we made the leap and planted every single acre with RTK auto-steer for year to year repeatability. I also use passive planter steering. This allows the tractor to compensate for its position to make up for any side-draft the planter may be experiencing so the planter stays perfectly on the strip, all the time. The technology on curves or contoured rows also allows me to make my strips with a three-point mounted toolbar and then plant with a pull-type planter. It will over or under steer the tractor so the planter trails perfectly in the strip or between the previous year's rows. I put a lot of emphasis on guidance and reusing saved swaths because it really makes it easy for another tool of no-till success "Controlled Traffic". Only penalize a small percentage of the total acres with wheel traffic.

From the road, strip-till appears to be flat, but the berm of worked dirt made by the shank adds tilth and height causing water to first want to run between the strips in the valley where the soil is held firmly in place and contains all the crop residue. It's a beautiful thing that can turn ugly if heavy rains overwhelm what can trickle down between the strips. Hillsides can flush strips out, in the worst case, you may have to hit them with a field cultivator before planting. I rent my neighbors, that's how often I have had to do it over the years. Still, the erosion is a fraction of what would have been lost with sheet erosion if that same field was in full tillage.

Why do I no-till, even on ground that is flat? The reason is simple, take a pocketknife and flip out a clod in tilled ground and another in long term no-till. One will have the texture of Sack-Crete, (cement mix) void of all air and very dense, hard to crush in your hand. The other will have the look of lava rock, full of pores and air passages from earthworms and decaying roots, it will also crumble easily when squeezed in hand. Why else would they use heavy disks to make roadbeds with? In the fall of 2019, soil structure allowed me to continue harvesting while many of my neighbors had to wait for a freeze. Most of the time I never even left a track which is great because that's next year's seedbed. I have a few places that need tile where I will have to level ruts before spring, but here again, it's a fraction of what the ruts full tillage would have left me. My wheel compaction is close to the surface where the frost will help soften it. Whereas tillage guys sank over a foot deep before finding ground firm enough to hold them up. I'm not sure with this mild winter if the frost would not have come close to getting that deep.

The climate is another reason to no-till, although this advantage is not very profitable yet. Farmers are one of the largest contributors to greenhouse gases. Working dirt causes a huge release of CO2 into the atmosphere. Carbon is released by the breakdown of organic matter through oxidation. No-till sequesters carbon in the ground where it belongs. Someday, we will all be forced to be in some type of a Cap and Trade program. Companies or individuals that release more than their fair share of carbon would have to buy credits from those who don't use up all their carbon credits. The day will come in which this will happen, although maybe not in my lifetime. I say, bring it on! It feels good to be part of the solution instead of part of the problem.

A weed or grass escape will stay remarkably isolated in no-till. This of course assumes that the weed seed bank in the field is relatively low to start with. In this case, some time on a UTV with a sprayer can save a lot of pesticide and dollars by hitting only the patches with a high rate and volume of herbicide. I find that driving across the field on a ranger versus a tractor will increase the frequency of me putting my boots on, and hands in the ground well over 10-fold as well.

In 2017 my best yielding field, I hate to say, was fully tilled, but it was one of my fields that were recently pattern tiled and I had compaction issues from when it was poorly drained. Hitting the reset button, in this case, was a good idea. The other field I did that year was pattern tiled as well but it did not outperform my strip-tilled corn that year on ground that was not pattern tiled. In 2018 I fully tilled four different fields. That year my full tillage corn yielded the same as my no-till corn. My strip-tilled corn did the best.

I have proven to myself and those I work with time and time again that I can raise as good as or better crops with conservation tillage practices as I could with full tillage. I may have to spend about another $11-$12 dollars an acre in some cases for herbicide. $11-$12 an acre does not go very far with the cost of today's tillage equipment and a horse big enough to pull them. Plus, you can never build up high organic matter with full tillage or keep near as much of our precious soil in place. Let's not forget about all the environmental benefits that those of us here today may never see, but our kids and grandkids will.

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

Uncertainty Is the Only Certain Thing

Wow, how things have changed in the last few months. We have seen the country (and the world for that matter) almost completely shut down. I do not think anyone could have predicted that back in January, or even March for that matter. We seem to be dealing in unprecedented times. However, if we stop and think about it, couldn't we say "wow, how things have changed?" if we look back every 3-4 months at any given point in time?

Just look at last year. We went from poor prices to unprecedented wet conditions throughout much of the Midwest causing our market to rally $1.00/bushel. We then moved in big swings for the next month and then lost that entire $1.00/bushel before harvest ever started. There was no way we could grow a good crop under those weather conditions (at least that is what everyone thought) but yet we did grow the crop.

Now we have seen the economic shutdown bring ethanol production to a screeching halt, and then try and start back up again. We saw crude oil trade negative for the first time in history. We have seen logistic disruption in almost every phase of our economy. What will our overall demand look like when we come out of this pandemic? Will our view of everything change, and along with it, our 'normal' habits? All of that can and will impact your market.

We deal with uncertainty all the time. Demand (ethanol, feed, exports) as well as supply (acres and yield) seem to be constantly changing, or at least have the potential to change. These changes seem certain, which can bring on uncertainty with your marketing. However, it does not have to be that way. I have written several times for this newsletter that producers need to know their costs and have a marketing plan. We know things change, but how we prepare for those changes affects your bottom line. You will not be able to predict those changes before they happen. However, you can protect your business from almost anything that happens when it comes to marketing. You can make sales and come back in and own what you sold on paper, with call options. You could wait to make cash sales until later, but hedge your crop on the board, or buy put options, to protect your downside risk. If you do these things, now when the market does change (and it likely will), you are prepared and not left flat-footed or like a deer in the headlights.

Based on current estimates, we look to grow the most acres of corn since 2012/13. With a trend-line yield, and very high demand already built-in, we could see corn ending stocks at their highest point since 1988. The corn stocks-to-use levels are projected at their highest point since 1992/93. It sure seems like the market will struggle to rally much unless these numbers change. If these numbers do not change, it also looks like space, to put this crop away, will be a deficit. How will that impact your local basis and your price? These are things you can plan for early, but if your marketing plan has flexibility, you will not get hurt if things do change, and current ideas do not materialize.

The May estimate for soybeans shows ending stocks to shrink to a four-year low, on expected good demand from China. What if that demand changes? What if bean acres go higher (which seems likely to me). Again, know that these numbers can change, but if you have a plan built on flexibility you will be able to weather the storm.

Uncertainty is always present, and it can impact your business both negatively, and positively. That uncertainty can be tamed with a flexible marketing plan that will manage risk but keep opportunities open for you.

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