In the past two decades, precision agriculture has seen a massive influx of technology and the progress is still rolling. Precision is an agricultural technology that, unlike genetics or chemistry, doesn't take a dozen years to hit the next promise.

Most advances in precision ag equipment have focused on answering one of two questions: How do I increase efficiency by reducing waste, or how do I add to the convenience of the operator. In essence, products such as automatic section control on sprayers, spreaders and planters along with options for automatic steering have not necessarily aided our ability to increase production by giving us options to select the right product, at the right rate, in the right place at the right time. However, they have just made the current process more efficient.

Continued on page 7...

For the past 5 years MFA has been working on a new feeding technology called Shield. This product has been added to our Ricochet Max minerals. It is a combination of ingredients designed to enhance the maximum benefits for the cow and her calf. I won't, and can't, go into these particular ingredients because the science, and I stress the word “science”, associated with Shield is very complicated to those of us that don’t have time to go back to school. Needless to say it was a task the first few years to have our producers trust us and give the product a fair trial. Now when I say customers, I also mean our stores and personnel too. If you take into account my age, I may have been one of those that said “Show Me”! I can now report to you that I’ve seen results that are far better than we could almost believe! Better breed backs, less challenged calves at birth, better tolerance to heat stress, and one of my favorites, is fescue endophyte problems are almost nonexistent if the mineral is properly placed.

We also added Shield to our new line of swine feeds called Evolution swine feeds at the same time. The reports coming back are the same as the mineral reports too. Growers have seen far less need for antibiotics in the swine herds, bigger and more pigs per litter and quicker breed backs too. Our swine producers were able to keep good accurate records and once those reports started coming in we knew we were onto something!
MFA started using Shield on a trial basis in some of our cattle feeds. I have been actively involved with these particular trials in our area. Sale barn calves placed on Cattle Charge with Shield without medication vs. Cattle Charge with CS700 as the control group. Did you cattlemen take note of the words “sale barn calves”? We had a feed trial on 4 different groups of calves that were bought, co mingled and placed into starter lots side by side and the bulls were cut. Just let me say, if you have the opportunity to do this, like Chad James and I did, it is not for the faint hearted! However, the results were outstanding for both groups and only 2 treatments in each group were recorded and no death loss. But the Shield calves had no antibiotics while the CS700 groups went through the 10 day protocol. What this means is Shield calves were only treated for the specific need while the CS700 group had a mass antibiotic use, as in our normal usage. Why are the results of this trial so important? A new program called VFD. If you are not aware of this term you will be soon. MFA is having many informational meetings so we can help you be informed about VFD’s before next January 1st 2017.

Shield has proven so successful that we have incorporated it into all the Ricochet minerals as a standard order. MFA is also offering the Shield products in our most successful cattle feeds. I can only ask you to consider trying these and seeing for yourself the benefits to your cattle. Our stores can also get the Shield option in the cattle and dairy feeds.

You will hear more and more about Shield Technology in the coming months. One may hear our competition say they also have the same thing. Just let me tell you that we have the research and science driven proof of the product, and we are continuing to keep up with this program. Let MFA help you move into the future with this new line of feeds!

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MFA’s line of mineral, GOLD STAR, covers all your needs.

Try GOLD STAR Ricochet FESQ MAX to help control those pesky flies this summer!

*Ricochet FESQ MAX* contains chlortetracycline to aid in the control of bacterial pneumonia associated with shipping fever and helps prevent anaplasmosis. 
*Also available with Altosid IGR for horn fly control.*

Call Bruce at West Central AgriServices in Adrian, MO for all your livestock needs!
Adrian 816-297-2138
Or contact your local WCAS Store.
Corn has rebounded and more since the decline from the stocks & planting intentions report that posted on March 31. Since then, prices have rallied 30 cents. Beans have increased over $1/bu since early March. The markets were relatively flat for almost the entire first quarter, so what’s been driving these markets higher? Hasn’t all the news been doom and gloom in the grain markets?

We are still faced with a large supply of stocks on both corn and beans, but we are seeing some signs of unexpected demand here and there. China has been non-existent for our feed grains, but their bean imports set a new record for the month of March. Brazil has been an exporter of corn, however, with interior corn prices screaming higher, they’re turning importer.

On global supply, wet weather concerns facing Argentina’s bean harvest are expected to impact supply. On the flip side, Brazil is facing a spell of hot and dry weather that is impacting their 2nd corn crop.

Those are a few fundamental factors that are impacting the market, but the number one reason the market is moving is the sudden appearance of our old fund friends. The volume of money that is pouring into ag commodities, particularly since early March in soybeans, has been very impressive. Funds are still net short corn, but have taken that short down somewhat over the last few weeks. Beans have been where their presence has been felt the most. On 4/13, net open interest in soybeans broke the all-time high of about 860,000 contracts, toppling the previous record set in July 2012.

Unlike in 2012, where a severe drought crippled supply, we don’t know to what degree the supply chain has been affected. The corn/bean balance sheet hasn’t been greatly impacted one way or the other this marketing year. Who knows if the funds will continue to get long beans and buy in their short on corn, driving our markets higher. However, should the outside money slow their interest in the ag sector, or look to liquidate their long bean position, things could get dark in a hurry. Make sure you are taking advantage of these rallies, for old and new crop.

Below are the December 2016 Daily Corn futures chart and the November 2016 Daily Soybean futures chart.
Hello to all our friends and acquaintances in Missouri and the surrounding areas! Five years ago, in conjunction with West Central AGRI Services in Adrian, we completed our first spring of custom NH3 application in your area. We met many wonderful people, and the wet spring provided us the opportunity to travel the area and familiarize ourselves with your region. Our schedule allowed us to return this spring and provide custom NH3 application again. In conjunction with West Central AGRI Services, we will be providing custom application this fall, and for the spring and fall in the years to come.

Hausmann Motorsports, LLC, is a family owned and operated agricultural operation and LPG hazmat transportation company. Hausmann Farms is our agricultural division. We have over 40 years of experience in the agriculture industry, farming our own land as well as providing custom application of fertilizer, seeding, chisel plowing, and harvesting. While we have vast experience, it is our customer service, attention to detail, and integrity that excels us as a company.

We are headquartered in Grand Forks, North Dakota, and we operate throughout the United States, with a concentration in the Midwest. We provide service to Fortune-500 oil and gas companies as well as to locally owned, rural co-ops. Please visit us at www.hausmannmotorsports.com, and feel free to contact us at your convenience to discuss any of your needs. Our contact information may be found on our website. We look forward to seeing all of you this fall!

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**Tytan Net Wrap**

**Edge to Edge**

**64 x 9000**

*Buy 5 or more rolls and receive a discount!*

**Why stay wrapped up with high prices?**

**WRAP up savings with Tytan Net Wrap**

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**Net Wrap Bale Protection**

**Edge-to-Edge:** Edge-to-Edge is a totally unique development that significantly improves the performance of the net, allowing it to spread the entire width of the bale - every time. This unique innovation reduces crop losses on hay and straw, and gives the perfect weather protection across the whole bale. It also significantly helps to improve silage quality; eliminating bale “shoulders” which can trap air when film wrapping.

**Even-Core Winding:** Each roll has a perfect winding pattern, producing flat-ended rolls with the core protruding at both ends. This avoids potential net failures caused by the roll fouling on the sides of the net box.

**Call Bruce at West Central Agri-Services - Adrian, MO**

for further details on pricing and discounts.

**Phone: 816-297-2138**
We are off to a good start on another year, with corn emerging, and bean planting following close behind. All things considered being my first spring in the area I think things are going well and have happened in a timely fashion. We all know that we will have weeds to contend with, so remember we have the resources to assist you with any weed issues.

Most areas have adequate moisture now and hopefully we will receive timely rains to sustain that. Fertilizer has sold well this year, which is expected, knowing we can’t raise a crop without it. Efficiencies are improving more and more with capable equipment and technologies like VRT applications, etc. I encourage you to keep up with the technologies evolving in our industry today. I think it will be necessary for survival, and for us to feed a hungry world as we proceed into the future.

With crops planted and fertilizer applied our big question now, is “how” and “when” to market what we produce. There are a wide range of opinions out there, as to what grain prices are going to do. The idea of locking in a price is good in theory, if you can do it at a profit, but the chances of that are slim to none at this point. However, we do have options to offset some of the risks involved in grain marketing. So let us know if we can help. One factor that we have to calculate into our marketing decisions these days are the effects the energy market has on the grains. With the ethanol industry being such a big end user of the corn we produce, and the direct relation that has to the oil industry, it does come in to play. It all comes down to the price of foreign oil when we look at what drives the energy market. The big question is, “who is really in control of the flow of oil and how trust worthy are those people”. When you look at it there are many United States companies that have some level of foreign ownership. It makes you wonder how many foreign companies, oil included, are owned or controlled by United States interests, so the question again, “can you trust them”? I wish you the best in your marketing decisions this year. If you have needs along that line let us know.

As always, we are here in your best interest, so tell us what we can do to help you succeed. Remember the earlier we know your needs, the better we can accommodate them. It’s never too early to plan, so please plan ahead, and let us help you plan, so we have as much time as possible to accomplish your goals.

With the recent moisture it looks like we will have some wheat to harvest in the area also! It won’t be long and that time will be here. I hope you all have a safe wheat harvest, and a fun filled summer with family and friends.
As spring is fully upon us and corn is now planted, I would like to update and let everyone know that there is a DEKALB and MorCorn plot planted at the Adrian FFA field. This test plot includes a wide range of different products in our portfolio and ranges in maturities from 100-113 day varieties. I would like to invite all to go look at these different varieties. If any questions or comments arise feel free to contact me at 660-631-0582. Plots are also planted at the Harrisonville, Centerview and Chilhowee locations. Questions or comments on those plots can be directed to Damon Anstine at 573-825-7016.

Field Test Plots By Ethan Owen

We welcome two new faces at Harrisonville this spring, Mike Bauer and Charlie Puffett. These two guys are young, willing to learn and help service all your needs.

Pictured at Left: Mike Bauer  Pictured at Right: Charlie Puffett
But what if you want to take the next step? Variable-rate fertilizer applicators have given us the ability to implement a right-product, right-place, right-rate fertility strategy and increase productivity, but that practice is not all that new. What if we had a piece of equipment that allowed us to select the right corn hybrid or soybean variety for different parts of each field?

I recently worked on MFA’s first dual-hybrid planter. It is rolling across fields this season changing from one seed variety to another based on data cataloged for zones throughout the field. Multi-variety planting is not an enormous challenge when it comes to equipment. Our team mounted two meters with seed-delivery hoses coming from both bulk tanks, which deliver different hybrids. The meters are electrically driven, so there is no problem with chains.

The mechanical side of multi-variety planting isn’t the greatest challenge. The real challenge begins with identifying where to change hybrids and why. How do you identify hybrids to best fit different areas of the field? Finally, how do you determine a plant population that is appropriate for each zone and for the hybrid that fits that zone?

To anyone in MFA’s NutriTrack program, this concept should sound familiar. Tailoring the product and amount to the need of each acre, but with seed instead of fertilizer.

Selecting the right fertilizer and rate for each acre becomes simple math for a computer when compared to past yield history and soil-test levels. But, how do you determine the right seed and population for each unique soil type and yield environment?

From the MFA precision agriculture team’s perspective, making recommendations for multi-variety planting was a challenge in selecting the right data to get the best answers.

When I started looking at the fields to be planted this year, I was lost in the data. We had more than ten years of yield data, Veris data, elevation data, soil-test data, and most importantly, firsthand experience in these fields. That may sound like a lot of information but, in my opinion, you can never have too much data.

I worked on my theories and drew different zones within these fields trying to identify what was causing yield changes in each area. But, you can look at the data all day and never get the whole story. After talking to the farmer, and MFA Crop-Track consultant, we were able to identify what drives yield in each area. This allowed us to get a game plan together to address problems and take advantage of every acre.

At a basic level, data can tell us where to draw a line between two field zones that differ, but experience tells us why they are different and what characteristics to look for in the variety you need for that zone. I’m not a seed expert, but by interpreting the data we had collected, I was able to help our seed specialist do a better job of selecting hybrids. Our options were expanded because we didn’t need a one-size-fits-all hybrid.

Making incremental increases in yield doesn’t have to be as complicated as setting up a multi-variety planter (or as expensive). Maybe you just want to change the population to account for soil and fertility variability. Or, maybe you just want to make sure you aren’t limiting yield based on fertility levels. Either way, it starts with collecting the data.

The future of precision agriculture is not just equipment. It’s data. More than that, it’s interpreting data to build the insight you need to make better management decisions.

For more information contact any MFA location and talk to a Crop-Trak or Precision representative.
Managing Horses Feed Intake
By Dr. Jim White - MFA, Inc. Staff Nutritionist

There has been a recent trend to manage horses to extend the time that they spend feeding. Extending the length of time horses spend foraging has been linked to improvements in horse health and well-being, including reductions in unwanted behaviors, ulcers, choke and insulin and glucose responses after a meal. Slowing feed intake is helpful for horses on restricted diets, those who are meal fed a few times each day, and horses who tend to aggressively and quickly eat feed. It is possible to slow down horse feed intake rates by altering how feed is delivered to the horse(s).

Slow-feed hay nets - Researchers evaluated different hay nets to determine the effect on horse intake rates. Horses were fed hay 1% body-weight twice daily: 1) off the box stall floor (control), or from one of three hay nets: large net openings, medium net openings and small net openings. Horses feeding from the medium net (1.75 inch openings) took just over 5 hours to consume the hay meal, while horses eating from the small nets (1.0 inch openings) took 6.5 hours to consume the meal. Both the control and large net resulted in consumption times of 3.2 and 3.4 hours. Thus if small or medium hay nets were used for twice daily feedings, the anticipated amount of time horses would spend foraging would be 10 to 13 hours each day, more closely mimicking a horse’s natural grazing behavior.

Grazing muzzles - Research has shown that grazing muzzles can help slow horse intake of both pasture and grain. The use of a grazing muzzle can reduce a horse’s pasture intake by approximately 30%. University researchers evaluated two grazing muzzles when horses were fed grain and determined that the use of a grazing muzzle slowed grain intake but tended to spill more grain. However, horses were able to acclimate to the grazing muzzle and increased their intake rate over time.

Specialized grain feeders - University researchers tested a newly designed feed bucket and determined that the bucket slowed grain consumption and reduced grain spillage. Horses spent 21 to 60 additional minutes eating grain from the feeder compared to a bucket or tub. However, most horses could not fully consume all grain from the feeder resulting in the need for frequent washing. In a separate study, others developed a waffle structure that was inserted into a feed bucket. They concluded the waffle insert increased grain consumption time by nearly 50% compared to a bucket without the waffle insert.

Continued on page 9…
Managing Horses Feed Intake  continued...

Obstacles - Researchers have tested grain feeding time using a bucket with four movable bocce style balls. These balls are 4 inches in diameter and they are much more uniform than the typical rocks I would pick up and use. The researchers placed the balls in the feeders and found the balls were effective at extending and maintaining the time it took horses to consume feed after multiple days of use.

Forage Quality - The fiber content in hays can be used to slow horse consumption. Neutral detergent fiber is a measurement of insoluble fiber and provides the plant with structural rigidity. The higher the NDF, the less a horse will consume. NDF levels between 40 and 50% are considered ideal and promote hay intake, while NDF levels above 65% tend to result in a reduction in intake. Hays high in NDF, > 65%, are lower in energy and have reduced intake. They are potentially useful when managing aggressive and fast eaters or horses on a restricted diet. However not all the forage allotted should be high in NDF.

Feeding Order - Feeding hay before grain slows feed intake. Horses will consume grain slower when hay is fed 20 minutes before the grain meal. When hay is fed 20-30 minutes before the grain, grain consumption rate is reduced by 25%. This is derived from grain intake of 0.4 lbs/minute when grain and hay are fed together; contrasted to 0.3 lbs a minute when hay was fed first.

High Country Plastics Slow Feeder Saver available on special order at your West Central AgriServices locations.

WCAS Welcomes Thomas Hermann to Rich Hill

My name is Thomas Hermann and I am a Seed Sales Agronomist at West Central Agri Services in Rich Hill, MO. I have my bachelor’s degree in Ag-business – Marketing and Sales from Missouri State University in Springfield and I have been with MFA full time since January 2016. I was born and raised in the small farming community of Ste. Genevieve, about an hour south of St. Louis where we are loyal to our local MFA. Growing up on a row crop farm, agriculture had my heart from a young age.

I was offered the opportunity of a seed sales internship last summer so I was familiar with the daily operations when I was extended a full time offer while still in college finishing my degree. Starting full time this past January was a great experience for me freshly out of college, but a long drive from home. As my title states I work with farmers day to day making sure they optimize their yield potential with key seed varieties offered through MFA, as well as scout their fields post-planting to make sure performance is at a maximum. Every day I feel that I am improving my knowledge of not only seed, but chemical and fertilizer operations, as well as equipping farmers with the necessary information and data needed to make the best economic decisions for their operations. I love the opportunities that MFA and WCAS offers, and I cannot wait to see what the future has in store.

Tom Hermann - Seed Sales Agromomist & Climate FieldView Pro - Dealer
Corn is just getting out of the ground and growing across much of the region. Cutworms have been popping up in fields earlier than normal this year. In fact many things have been coming in about three weeks earlier than normal. I have been finding giant ragweed and pigweeds for weeks now. I think growers need to stay on top of their chemical applications this season. After last years’ addition to the seed bank, weed flushes are going to be heavier than many farmers are used to. I have also seen a lot of breaks in pre-emergent herbicides this spring. With dry weather after applications, a window was left open for many weeds to emerge without the herbicide residuals being activated. Farmers need to be in their fields evaluating post applications for these escapes. If weeds look healthy now, they are not going to suddenly take up chemical and die later or after another rain. Weed control is crucial to yield in the early growth stages. I have also seen a lot of uneven emergence across the region. A lot of corn was planted into dry conditions allowing for some seed to be closer or further from moisture which in turn allows some to germinate quicker than others. Spring came early but didn’t continue to warm up much after it did. This also created cold and warm pockets in fields. This, added to the dry planting conditions, allowed for a lot of uneven emergence around the region.

Soybean burndowns should be applied as soon as possible. I do not believe growers are going to be too early this season for a burndown. With giant ragweed at 3-4” now, growers are going to be scrambling to kill them. Marestail are also bolting now and roundup and 2,4-D will not likely kill many of them after they bolt. I know that planting beans early is enticing this year, but beans do not have the protection that corn does early on. A soybean’s growing point comes out of the ground first and once it’s up, a frost will kill them. Corn is protected in early stages with the growing point underground until V6. Soybean yields are also related to weed control early on. Keeping weeds from emerging with residuals will be much easier than trying to kill them once they are up. If you don’t like using Cobra, then overlapping residuals are the way to go. There are not many sure things in this world, but weeds coming every year is one. You can hope to not have to post beans but you should plan to do so.

Wheat is just getting ready to flower. I know wheat prices are less than stellar right now, but a fungicide at flowering is the only thing we have to combat head scab and with rain in the forecast this week we may see it again this year. I do not anticipate it to be as bad, but rain at flowering is ideal for head scab growth. Prosaro or Caramba are the two best options for head scab suppression. If you do plan to come back across your wheat adding an insecticide it would be a good plan to help protect against armyworms. It’s time for them to be out and they can run through a field very quickly. If you are not planning another application, you should be scouting for armyworms from now on at least weekly. Many fields did still have a yellow tint to them despite having sufficient nitrogen applied. This is mainly because of cooler soil conditions up until recently, and a dry spell, which did not allow nitrogen to get to the root zone. Nitrogen needs at least half an inch of rain to get washed into the soil and before the last week or two, we did not have that for most of the topdress timeframe in wheat. If you did not use a stabilizer, you could have had volatization with urea or UAN.

Crop-Trak can help with many of these situations and provide recommendations to combat many problems we face in our crops. Everything from fungicide timing and weed control applications to nutrient deficiencies and pest problems. Contact West Central AgriServices for more information on our Crop Consulting program Crop-Trak.
Gay (Wells) Bedwell joined the WCAS Adrian team as a bookkeeper in January. She brought with her experience in finance as well as customer service from many years at AT&T. Gay grew up in Butler and is glad to work back in the area. Her after-hours activities include “building” quilts and relaxing with her dog, Dolly. Gay is excited to learn about grain bookkeeping as well as the fertilizer, chemical, and feed areas of the business. She looks forward to working with you in the near future. Contact Gay at 816-297-2138.

Bruce Schaller has lived in the Adrian and Butler area most of his life. He has been involved in the cattle industry most of those years. Although a lot of things have changed over the years in how we care for our livestock, Bruce is excited to get back into the livestock industry full time. Come visit Bruce at WCAS in Adrian with any of your livestock questions, and if he doesn’t know the answer, we have the resources available for him to find out the answer for you. Bruce looks forward to working with you in the future and wants to help you get the most out of your livestock production endeavors. Don’t forget to ask Bruce about preserving your hay crop from the elements. He has a great source for Net Wrap. Contact Bruce at 816-297-2138.

Mike Martin - Mike is the outside operations supervisor. He is also our safety coordinator. Mike started with us late last summer.

Pictured in the middle is Allen Steele and pictured on the right is Robert Gillispie. You will see both of these guys working around the plant, driving delivery trucks, running the trackmobile to load rail cars, loading fertilizer, among various other duties.

Not Pictured: Robbie Burgess - Robbie is working at the elevator and will be unloading trucks.
New Nitrogen Tools
By Jason Worthington - Sr. Staff Agronomist, MFA, Inc.

In season nitrogen (N) applications on corn and wheat have long been a big part of many growers’ fertility programs. It is rare that wheat fields don’t receive a top dress application of N, if not two spring applications, and more and more you are seeing top dress N in corn fields whether due to a planned application or as a rescue application. Year in and year out the question that grower’s and applicators ask before making their applications is how much N should we apply in season? That, of course, is the $1 million dollar question.

The right amount of in season N is going to depend on a multitude of factors including soil organic matter, amount of N applied pre-plant, amount of N mineralization in the given year, yield potential of the crop, amount of N leached, amount of N denitrified, previous crop, N stabilizers used, just to name a few. It becomes fairly obvious based on all these variables that the right top dress rate of N will not be the same every year. Beyond season to season variability, changes in topography and soil type within the same field means the appropriate rate will not necessarily be the same from one end of the field to other. It is true that for not just years but decades now we have been able to variable rate apply fertilizers, and we have created very accurate recommendations for nutrients like P and K through soil testing and yield data, but building an accurate variable N recommendation has been more elusive. Improvements on variable rate (VR) nitrogen are hitting the market place. The choices growers have right now basically come from one of three categories: machine mounted crop sensors, aerial imagery, or N models.

Crop Sensors

Of the three categories mentioned, crop sensors mounted to N application equipment for on-the-go VR N applications gained wider spread acceptance first. Systems like AgLeader’s OptRx work by reading near infrared light reflected off of the plant. Dark green plants with sufficient N will absorb more light and reflect less than lighter green plants in need of N. Continued...
New Nitrogen Tools Continued

The first step is to measure both the area of sufficient N and deficient N in the field with the sensors by driving over a sample area of the field. Once initial measurements are taken and application begins the sensors continuously read the amount of light reflected and application rates can be calculated and adjusted on the fly by the computer and VR controller on the machine. This process is very convenient in the fact that the applicator does not have to have a recommendation (rec.) built beforehand. The rec. can be built on the spot. However, it also means that the total amount of product needed is not determined until after application is complete leading to challenges with product delivery.

Aerial Imagery

Using aerial images to determine a VR N rec on a field is actually quite similar to the principle behind sensors. The information gathered by an aerial image to determine N rates is also the amount of absorbed or reflected light. This can be measured in several different spectrums, but the theory is the same that crops with adequate N will be greener than those with inadequate N. The major difference is that the aerial images can be turned into N recommendations ahead of time allowing the operator to know how much fertilizer to take to the field. Software that MFA is evaluating can take high quality images captured from satellites, airplanes, or even a grower’s drone to create these recs. The processing time involved in building the recommendation is the challenge here. This challenge can be compounded when you take into account that light readings from aerial images or in crop sensors work best when the canopy is closed ensuring that reflected light is from leaves and not bare soil.

N Models

N models work much differently than sensing technologies. Instead of taking a light reading to determine the N sufficiency of the crop at that point in time, models attempt to measure the factors that affect N availability, N loss, and yield potential to create a N rec. Factors that we mentioned earlier such as date of application, weather conditions since last application, previous crop, soil types and properties, N stabilizers used, and the form of N applied, just to name a few, are either entered into the model or measured through the season by the model to measure N loss and mineralization. The model’s goal is to then predict N needs for the remainder of the season. This is advantageous from the standpoint that recommendations can be made with some added accuracy over typical flat rate recs. However, if any information is left out or unaccounted for, the accuracy of the N model will decrease. Where sensing or imaging technologies measure current conditions models are working off of a lot of calculations and assumptions.

Regardless of the method used to develop more accurate in season N recs, the new options should excite growers. The goal of VR technology, of not just N applications, but all VR fertility applications are to make sure the right rate is applied in the right place. This is not just good stewardship for the environment, but leads to increases in productivity and efficiency of the fertility inputs applied by our growers.
Mineral supplement for cattle

- Vitamin fortified for improved animal health, covers animal’s dietary vitamin requirements
- Supplies essential minerals of high bio-availability: calcium, phosphorous, magnesium, sodium, selenium, iodine, zinc, manganese, copper, cobalt; covers animal’s mineral requirements
- Medicated for control of anaplasmosis: improved animal health
- Options available, nonmedicated; with CTC; with Methoprene IGR/CTC: an effective pesticide to reduce the pressure of hornfly predation
- Flavored for good acceptance, consistent intakes
- Uses Rain-Off® technology to reduce weather damage to exposed product
- Uses Shield™ technology to improve colostrum quality and production, stimulates the animal’s immune response
- Uses essential oils which have been shown to improve animal performance grazing fescue pastures
- When Ricochet is used as a yearlong mineral program, it has high enough magnesium levels to prevent grass tetany
WHAT DO YOU (THINK YOU) KNOW ABOUT ANTIBIOTICS?

ant·i·bi·o·tic
a naturally occurring, semi-synthetic or synthetic substance that exhibits antibacterial activity (i.e. it kills or inhibits the growth of bacteria).

DISEASE PREVENTION:

Humans
When patients are getting their teeth cleaned, a dentist can prescribe an antibiotic in order to keep tender-mouth patients from developing an infection.

Livestock
Turkeys and chickens are given antibiotics to prevent serious and fatal bacterial intestinal infection.

DISEASE CONTROL:

Humans
When a college student is diagnosed with meningitis, all students who have been in contact with the student are offered a short-term oral medicine to control further disease spread.

Livestock
One animal becomes clinically ill and the entire herd/flock will be given an antibiotic to stop the disease from spreading to other animals.

DISEASE TREATMENT:

Humans
Children develop ear infections and then are given an antibiotic to fight the infection.

Livestock
A pig may have contracted a respiratory infection and is treated.

WHAT ABOUT GROWTH PROMOTION?

Currently, livestock producers can use feed antibiotics—as approved by FDA—to allow animals to grow more efficiently using less feed. However, these uses—called growth promotion—are being eliminated by FDA with the cooperation of the agricultural community.

SO, THERE’S A NEW POLICY

Under a new FDA policy, antibiotics used in human medicine will not be used for growth promotion. This policy, being implemented with the cooperation of the agricultural community, will phase out the use of medically important antibiotics for growth promotion and phase in veterinary oversight for all remaining uses of antibiotics in food animals. It is anticipated that by December 2016, all uses of these antibiotics in farm animals will only be to prevent disease and treat sick animals, under the care and prescription of a licensed veterinarian.


Download this document and more agricultural facts at www.mfa-inc.com/facts.
UPCOMING EVENTS

- Mini Training Camp – July 2016
  - Crop Protection/Seed Care Field Trials
  - Precision Agronomy Field Trials/Examples
- Watch for upcoming VFD informational meetings concerning antibiotic use in livestock.

Check our webpage often for Upcoming Events and Meeting Dates  www.wc-agriservices.com