Western MO MFA Agri Services Newsletter

December 2013
Volume 1, Issue 3

Inside this issue:

Special Points of Interest:

- MFA Foundation Scholarship Information
- December Recipe
- Merry Christmas from Western MO Agri Services

Winter Wheat Production

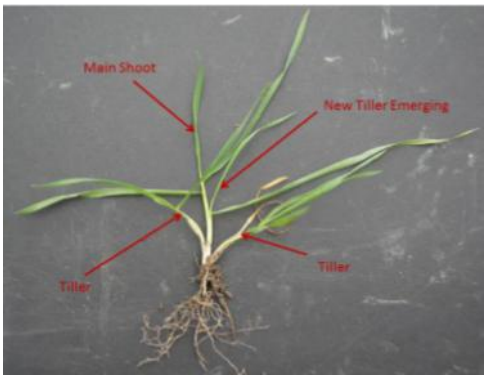
Rodney Woody, Carytown Manager

Wheat is not a new crop to our territory. With the yields that we have been experiencing, it's good to provide the opportunity for some mid-year cash flow.

There are several management factors that should be utilized to maximize the yield potential of your wheat crop. The first step in the management process is to make sure you end up with an adequate stand. Treating wheat that is put in the ground with a fungicide and an insecticide will aid in that process. For maximum yield potential, you need at least 24 plants/sq ft. Fields with final stand counts below 15 plants/sq ft have less than 75% of full yield potential and should not be kept for grain production. If stand counts are low but adequate to keep, say 18-21 plants/sq ft (90 -95% yield potential), then consideration should be given to an early nitrogen application to stimulate additional plant tillering.

The next management factor to consider is how much tillering took place in the fall. Tillers are shoots that develop from nodal buds on older wheat shoots. The number of tillers is determined by the seeding rate, soil moisture and fertility, temperature and variety. A winter wheat plant grown under "normal" conditions will have 3 to 6 tillers. Tillers begin developing soon after the seedling emerges from the soil and continue to be developed through the fall and early spring.

Wheat should be scouted in the winter to determine the number of tillers. If the number of tillers are less than 60/sq ft, then spring nitrogen applications should be made at green-up to stimulate additional tillering. If the wheat has an adequate number of tillers, then spring nitrogen applications should be made closer to jointing.



Continued on Page 2...

…Continued From Front Page In most cases, enough nitrogen is available in the soil for proper fall tiller development, especially if 18-46-0 (or similar) fertilizer products were applied in the fall. Nitrogen uptake is greatly increased during stem elongation in March and April. The longer the time between nitrogen application and plant uptake, the greater the risk that the nitrogen will not be available when needed. To produce a 60 bushel wheat crop, 70-100 pounds of nitrogen/acre are needed.

Another management factor to consider is weed control. Weeds reduce wheat yields and profits by competing with the crop for moisture, light, space, and nutrients. The time of weed emergence relative to crop emergence has a tremendous influence on competition and yield reduction caused by weeds. Weeds that emerge with the wheat crop or early in the season are more competitive with wheat than weeds that emerge later in the season. Thus, winter annual weeds generally cause more yield reductions than summer annual weeds do.

Aphids can cause damage and lead to disease

Attention should also be given to insect pressure in the fall and spring. This is a management aspect that is often overlooked in wheat production that can cause serious economic damage if not kept in check. Some diseases, such as Barley Yellow Dwarf (pictured below), are also spread by insects feeding in the fall. Insect pressure can be more detrimental to a wheat crop if it is already stressed by environmental conditions.

Frequent field scouting throughout the growing season, from planting to harvest, is important for monitoring crop development and identifying problems in the early stages before they become severe. These problems could be from insects, diseases, weeds or environmental factors. Correct diagnosis is crucial because control measures are different for different weeds, diseases or insects.

If you need assistance in scouting your wheat or have questions, contact your local MFA retail location to inquire about our Crop-Trak crop consulting service and how it can benefit your operation.

Rodney Woody
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December Recipe: Molasses Crinkles

Tis' the season for sugar and spice and everything nice! Molasses crinkles are quick and easy, but oh so yummy! They will be gone by the end of the night, I promise. To see the recipe, please go to page 8.

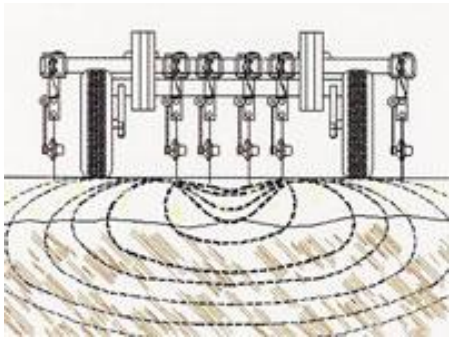
What Kind of Tool is Veris Technology and Where Can It Be Used?

Eric Preston, SW MO/SE KS Regional Precision Sales Manager

For this article I have decided to talk about Veris Technology and how it can be used in our area in the future and answer some of the basic questions about Veris Technology. One of a Veris machine's primary uses is to map "Soil EC."

What is 'Soil EC'?

Soil EC is Soil Electrical Conductivity – a measurement of how much electrical current soil can conduct. It's an effective way to map soil texture because smaller soil particles, such as clay, conduct more current than larger silt and sand particles. Soil EC measurements have been used since the early 1900's - Veris mobilized the process and added GPS. As the Veris EC cart is pulled through the field, one pair of coulter-electrodes injects a known voltage into the soil, while the other coulter-electrodes measure the drop in that voltage. The result: a detailed map of the soil texture variability in the crop rooting zone.



What can be done with this detailed soil texture map of the crop rooting zone information?

Soil texture relates to factors that have a major impact on productivity, such as: water holding capacity, Cation Exchange Capacity (CEC), topsoil depth, and nitrogen use efficiency. Therefore, EC maps often correlate well with crop yield maps. An EC map is a fundamental layer needed for precision action, such as guided soil sampling, yield map analysis, variable seeding, variable yield goals/Nitrogen, and land-leveling.

In summary

I believe that the Veris Technology is something that will be a great tool in our area in the near future. Having accurate soil texture maps are going to be very critical in determining variable seeding rates and also helping refine nutrient application timing and rates. I believe that this technology will be just as valuable as grid sampling has been done in the last 2 years and will become a common practice very soon. This article has barely even scratched the surface on how Veris Technology can be used. To learn more, ask your local Western MO MFA Agri Service location about Veris availability and pricing.

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The Lamar newsletter is coordinated by Felicia Costley and MacKenzie Oswald. It is printed through Morrison Printing in Lamar, MO. If you have any agronomy, feed, seed, animal health, or grain topics you would like us to address, please call Felicia at (417) 682-5593 or send an e-mail to fcostley@mfa-inc.com or moswald@mfa-inc.com.

Kill Next Year's Thistles Now for Better Hay in 2014

David Moore, CCA, Range and Pasture Specialist

Fall is coming to an end, and thank goodness we have some grass again! Most of our spraying for the year is behind us now. However, we can attack next year's thistle crop this fall.

The three primary thistles we have here in the four state area are the Bull Thistle, Musk Thistle and Canada Thistle. The Canada Thistle is harder to kill, so we do need to try and identify what type we have. I'll give a brief description of each:

The **Canada Thistle** is a perennial and grows from rhyzomes, so it tends to grow in patches or clumps. It does not typically grow a rosette in the fall, as do the Bull and Musk Thistle. The stems and flowers of the Canada Thistle do not have spines on them. Young leaves may have some fine hairs on them.

The **Bull Thistle** is a biennial, so it begins life as a rosette in the fall, then bolts upright in the spring. The rosette of the Bull Thistle is covered in coarse hairs. Stems and flowers have spines. The leaves arrange themselves in spiny "wings". This is the spiniest thistle we have here in Western Missouri.

The **Musk Thistle** is also a biennial, so look for the rosette in the fall. Musk Thistle rosettes lack hairs on the upper leaf surfaces and are often more pale green than the Bull Thistle. Stems and flowers have spines.

In a nutshell, if you see rosettes in the fall, we are dealing with the Musk or Bull Thistle. When looking at plants that have bolted upright already, if the stem has no spines, we are looking at the Canada Thistle.

If the vegetation in our pasture and hay fields will allow spray to reach the rosettes, then we can expect a fall spraying to reduce our spring thistle population greatly. We have to remember that we will be hitting Bull and Musk Thistle only in the fall. Canada Thistles can be addressed next spring.

Canada Thistle

Bull Thistle

Musk Thistle

Continued On Page 5...

...Continued from Page 4 A November/early December application (when the temperature is 45° or above) of 2 pints of GrazonNext HL per acre or 2 ounces of Chaparral or 1.5 quarts of Grazon P+D per acre will do a nice job. Don't forget to use either Torrid or Astute as your surfactant. This means the difference between success and failure. The proper rate for either is 1 quart per 100 gallons of solution. To spot spray mix 2 ounces of GrazonNext HL and ½ ounce of Astute per gallon of water.

I am often asked, "At what point should I sacrifice my clover to kill my weeds?" After looking at many of these fields, I have come to the conclusion that if you are asking the question, then it is time to spray now. A healthy, weed free grass stand will produce more pounds of beef than a weedy field with clover. After the weeds are controlled, and residual herbicide has dissipated, we can reintroduce clover.

Fall is also a great time to soil test. Knowing what nutrients are lacking and what the pH is can help us to formulate a plan for healthy grass stands. High fertilizer values and two big drought years in a row have had a big impact on the health of our grasses, and it wasn't a good impact. Act now so we can go into spring in better shape than we are today…

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Get the Most from Your Vaccination Program

Tony Koger, Livestock Consultant & Sales

The following are some suggestions that may help products work to their full potential.

All Products

Read the label and package insert. The instructions for handling and administration should be there.

If products require refrigeration, make certain they are refrigerated when you purchase them, keep them refrigerated before use, and keep them refrigerated while chuteside. Ice packs or a frozen gallon jug of water inside an ice chest work well to keep products cool. Be careful-some products can be damaged if allowed to freeze.

Mark syringes so you know which product they contain while chuteside. A piece of masking tape or a piece of colored tape (different color for each product) with the name of the product written on the tape with a permanent marker works well. Allflex syringes have different color draw knobs you can purchase. Never re-enter a bottle with a used needle. The possibility of contaminating the rest of the product in the bottle is high. Put a new needle on the syringe each time you need to re-enter the bottle. You can purchase a draw-off assembly and automatic refill syringe.

Change or clean equipment any time existing equipment gets dirty enough that it creates a risk for injection site contamination. Clean syringes and equipment at the end of each day's use. You can obtain a guide on how to properly clean a syringe at your local MFA Store.

Continued On Page 6...

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Pharmaceuticals

If products are in a brown bottle, the contents inside can be inactivated by sunlight. Keep them out of direct sunlight. The injectable avermectins (Ivomec, Dectomax) are susceptible to inactivation by sunlight. These products come packaged to help protect them from sunlight, but once you draw them into the syringe, keep the loaded syringe out of sunlight. Be certain that syringes or equipment used to administer injectable Dectomax are thoroughly dry before use. More importantly, be sure not to inject any water back into the product bottle. Water will cause the product to precipitate out (you will see little crystals) and render it useless.

Before treating with any of the white drench dewormers (Safegaurd, Synanthic, Valbazen), cattle should be held off feed for at least 12 hours. The presence of feed in the rumen will reduce the effectiveness of these products.

Even when using injectable antibiotics, cleanliness is essential. The antibiotic in the bottle will not necessarily kill contaminates injected into it. Don't mix different antibiotics in the syringe or bottle—some cause an obvious physical reaction, some cause an unseen chemical reaction and some antibiotics work by conflicting modes of action, which may neutralize the activity of each other. Try not to give an antibiotic on the same side of the neck you are giving vaccines. The antibiotic may gravitate under the skin and run together with the vaccine and render it useless.

Vaccines

All modified live viral (MLV) vaccines are susceptible to inactivation by sunlight. When using them, keep the bottle in the cooler out of sunlight. Also, keep syringes out of the sunlight. Sunlight will kill the vaccine in the syringe if left exposed for more than a few minutes.

Do not mix up more MLV vaccine than you will use in an hour. As soon as this type of vaccine is mixed, the viral particles come to life, and then gradually begin to die off. If you take too long to use the product after mixing, enough viral particles may die making the vaccine ineffective.

Keep vaccines thoroughly mixed until the bottle is completely empty. This is especially critical with any non-clear vaccines (such as blackleg). Suspended particles will settle over time.

Do not beat or shake the vaccine bottle hard to get the contents into suspension, especially a MLV vaccine. It could destroy the vaccine. Some vaccines have a toxoid molecule that will break open and create a poison that could poison the animal when the vaccine is administered. Swirl them gently to keep from damaging cellular particles or releasing endotoxins.

DO NOT use disinfectants to clean syringes or needles when using MLV vaccines. The disinfectant will kill the vaccine. Wash out the syringe and other equipment used with MLV vaccines with hot distilled water (at least 212 degrees F.)

Change needles every 10 head or when you need to re-enter the bottle.

It is safe to use disinfectants with killed vaccines (blackleg, killed IBR-BVD, etc.), antibiotics and other pharmaceuticals.

Continued On Page 7...

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Implants

Some implants must be stored under refrigeration. They also should be kept cool chuteside prior to use. Make sure the ear is clean before implanting. Clean it if necessary. It is a good practice to clean implant needles with a disinfectant between uses. I like to use Nolvasan S.

Put ear tags in the cattle's ears before implanting to avoid knocking out the implant with the ear tag. Insert the implant needle at a point that will allow you to deposit the implant in the middle 1/3 of the ear. Avoid existing implants, ear tags and tag holes. Feel the implant to make sure you didn't fire a blank.

All Products

Use Beef Quality Assurance techniques and guidelines. DO NOT inject into top butt or leg. Inject all products in the neck. Use subcutaneous (SQ) route of injection at all times unless product specifically calls for intramuscular (IM). Select a clean area, or clean the area before injection. Don't poke your needle through manure that the animal may have on them at the injection site before anything is deposited on its neck.

Use proper needle length and diameter. For water-consistency products, use an 18 or 16 gauge needle. Use either 5/8 or 3/4 inch needle for SQ. Use 1 ½ inch needles for IM. It may be necessary to use 1 inch needles on smaller calves to avoid hitting the bones in the neck or the major ligament running directly above the spine.

Space injection sites at least 4 inches apart. This is a normal hand's width. Place injections side-by-side (horizontally) instead of one-over-another (vertically). This is especially critical with SQ injections where the materials may gravitate and run together under the skin.

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Attention High School Seniors!
Apply for the MFA Foundation Scholarship

It's that time of year again, time for area high school seniors to decide what they want to do with the rest of their lives. If they decide to attend college, scholarships are extremely helpful in providing the financial means in order to achieve their aspirations of a higher education. MFA offers scholarships to graduating seniors of local high schools. Each MFA and MFA affiliated location gives at least one local high school senior a one-time $2,000 scholarship.

Have your high school seniors ask their counselor about the MFA scholarship and other Agriculture related scholarships. If the counselor does not have information on these scholarships, please contact your local MFA store for more information. The MFA Foundation Scholarship application is DUE to March 15, 2014. Please see your high school counselor for more information.

Are Your Cows Ready for Winter?

Jody Boles, Feed ASM

I have seen some black wooly worms, some brown and a couple that were dark red in color. The persimmons I have checked had knives and forks. Plus, in the month of August, we had six foggy mornings. So what does all this mean for the winter that is just beginning? Only God knows that answer.

As producers we just need to make sure our cows are ready for whatever the winter brings to us. Body Condition Score (BCS) your cows now. If you are unsure how to score your cows, MFA would be glad to help you do so. You would like your cows to be in BCS of 5 to 6 on a scale of 1 to 9. Cows in this BCS will eat approximately 1.5% of bodyweight, cows that have a BCS of 4 will eat approximately 1.75% of bodyweight and cows who's BCS is 3 or less will eat approximately 2.25 to 2.5% of bodyweight. One might say that 2.5% bodyweight is fine since I have lots of hay this year, and I will just feed the cows all the hay they will eat. The problem with that is this year's hay quality; most of the hay was put up late or got rained on several times before being baled. Then once it was baled, a lot of the hay has had 5 to 10 inches of more rain on it.

I get to see a lot of forage tested every year, and the ones I have been seeing this year are not good. The energy levels are running low to very low, and the fiber levels are very high. Therefore even though we have a very good supply of hay, it does not mean that the cows will stay in condition on hay alone.

Have you had your forage tested? If you have not had your forage tested, call your local Western MO MFA Agri Services store or you can call me, Jody Boles, at (573) 631-6969 and ask about getting this done. Once your forage is tested, MFA can help you with a plan to keep your cows in the right BCS all winter long. The period during which a calf crop percentage is affected most by nutrition is from 30 days before calving until 70 days after calving. Cows gaining weight just before and during the breeding season have fewer days between calving and the first heat cycle and have higher conception rates.

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Molasses Crinkles

3/4 cup margarine
1 cup brown sugar
1 egg
1/4 cup molasses
2 1/4 cup flour
2 tsp baking soda
1/4 tsp salt
1/2 tsp cloves
1 tsp cinnamon
1 tsp ginger

Directions

Mix together, roll dough into balls, dip in sugar.

Place sugar side up 3 inches apart on grased baking sheet.

Sprinkle tops with 2 or 3 drops of water to produce "cracked" surface.

Bake 375° for 10 to 12 minutes or until set....NOT hard

Properly Storing Grain

Jerry Bain, Western MO MFA Agri Services General Manager

Being new to the Barton County area I am still learning the "habits" of the local farmers. One of my observations has been that the biggest percentage of corn was put in bins on the farm this fall. With that in mind, I found this article on Grain Quality that tells how to properly care for stored grain, especially corn. I hope that you find this article to be of value as you look to move this stored corn in the near future.

Please feel free to stop by the store. I look forward to meeting you. For those that I have already met, I look forward to getting to know you better.

Grains have a shelf life just like any food product. Shelf life is primarily determined by moisture content and temperature. It is gradually used through the time before use, and each operation or storage regime consumes a portion of the life.

Check combine settings between fields because fines and cracked kernels spoil much faster than whole, sound kernels. Grain that starts to heat or get moldy has essentially used its storage life. The goal of grain storage management is to reduce the rate at which the life is lost. **Every action taken after harvest affects the ultimate length of time grain can be stored and the quality at the time of use.** Always get grain cool quickly and minimize variations both from the dryer and from the field.

Holding wet grain, especially without aeration, shortens shelf life considerably. Fungi grow very fast in corn above 20 percent moisture. Overnight storage of wet corn in a wagon or truck can have a marked effect on future storability. Always get wet corn into an aerated storage immediately. Likewise, the practice of holding medium moisture corn (16-20 percent) for future blending or feeding opportunities will cause problems for corn stored (even after drying) into the following summer.

Aeration Practice

Phase 1: Fall Cool Down

- Lower grain temperatures stepwise
  - October 40-45 F
  - November 35-40 F
  - December 28-35 F

Phase 2: Winter Maintenance

- Maintain temperatures with intermittent aeration
  - January, February 28-35 F

Phase 3: Spring Holding

- Keep cold grain cold
  - Seal fans
  - Ventilate headspace intermittently

This year there will be more wet corn held because of high field moistures and expensive drying. Wet corn should be checked weekly, and monitored for temperature increases. Wet corn should have 0.2 cfm/bu of aeration, double the normal rates for dry corn. Problems will start to show up in February and March as temperatures rise.

Continued On Page 10...

...Continued from Page 9

Options when large amounts of wet corn exceed drying capability

1. Dry to 17-18 percent moisture and cool in the storage bin. Corn will end up at about 16 percent moisture.
2. Dry to 20 percent moisture, cool in bin, hold wet corn for spring.

The less you dry, the more risk you are accepting, but spreading out the drying into spring may be the only choice. Risk will require more constant attention.

Be selective about what corn is placed in storage versus moved at harvest. Deliberately decide which corn and bins are going to be kept into the summer. This should be your best (highest test weight) corn, harvested below 20 percent moisture with careful combine settings to minimize trash and placed in storages with good aeration rates/airflow distributions.

Low test weight corn should not be put in temporary storages or outdoor piles. It is also not wise to mix corn of different crop years in the same storage bin; the mix is generally much less stable than each year's crop stored separately. The 2013 corn will be more susceptible to mold and heating in storage than average corn at the same moisture, which means that holding wetter corn should only be done in cases where there is drying or other options to halt spoilage if it starts.

Remove the center core and use a grain distributor if possible. Check your grain at least every two weeks, with some way to take grain temperatures. If a slow rise is noted, aerate. If a hot spot starts, make that the next corn to be moved out; one storage problem always leads to another.

Understand your buyers' needs, and match storage and drying practice to intended marketing time. For example, corn sold for July or August 2014 delivery should be dried more fully right away.

Maximum storage time (months) for corn and soybean*

Corn temperature ° F	Moisture Content Corn *(top %)*, Soybean *(bottom%)*						
	13%, 11%	14%, 12%	15%, 13%	16%, 14%	17%, 15%	18%, 16%	24% N/A
40	150	61	29.0	15.0	9.4	6.1	1.3
50	84	34	16.0	8.9	5.3	3.4	0.5
60	47	19	9.2	5.0	3.0	1.9	0.3
70	26	11	5.2	2.8	1.7	1.1	0.2
80	15	6	2.9	1.6	0.9	0.9	0.06

*Based on 0.5% maximum dry matter loss—calculated on the basis of USDA research at Iowa State University. Corresponds to one grade number loss; 2-3% points in damaged seeds. Soybean approximated at 2% lower moisture than corn.

Written by Charles Hurburgh, Professor of Agricultural and Biosystems, and Roger Elmore, Professor of Agronomy with research and extension responsibilities in corn production. Forwarded by Jerry Bain.

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Precision Advantage

Jason Frieden, Agronomy Sales Rep

Are you interested in optimizing your yields? Using the Precision Advantage program here at MFA, you can do just that. We sample on a 2.5 acre grid, treating each section as a separate field. There can be large variations across a single field. Why would you not treat these areas different from one another and apply the optimum amounts of nutrients based on what they need?

With our variable rate spreader trucks, we can adjust the amount of fertilizer being spread across an area on the go. This ensures that each area is receiving the correct amount of fertilizer based upon what it can grow. Goodbye to the days of spreading excess fertilizer on poor soil and failing to provide adequate nutrients to areas that are capable of producing better.

We can also apply lime in variable rates, allowing you to neutralize more acidic areas, while at the same time not worrying about raising your more optimal areas too high. Many times we have found that the savings on lime alone is enough to pay for the cost of sampling. Give us a call and start applying fertilizer with precision today. Also ask about our scouting services.

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Jason Frieden

Zach Costley

Hayden Laepple

Bruce Robertson

Diane Dill

(L-R): Lisa Brekke, Felicia Costley, Sharon Collier

Everyone at Western MO MFA Agri Services would like to wish you a very Merry Christmas, and a Happy New Year! May all your travels be safe! And all the time spent with family and friends be blessed!

Josh Munton

Aaron Foster

Doug Fast

Jerry Bain

Adam Montee

Mark Cherry

Upcoming Events

Missouri Cattlemen Association Convention and Trade Show
January 2-4, 2014

The Western Farm Show
February 21-23, 2014
American Royal Complex
Kansas City, MO

Check Us Out on the Web at www.lamarmfa.com!!!

MFA AGRI SERVICES

Western MO MFA Agri Services Locations

Carytown: (417) 394-2435
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