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AG NEWS & VIEWS

BARTON, CEDAR, JASPER, MCDONALD & NEWTON COUNTIES

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Fungicides on Wheat: Timing is Critical

by Jay Chism

Apply fungicide to wheat at the early boot stage to head emergence. Research shows fungicides at this growth stage, when the flag leaf is in danger of infection will provide the most benefit.

There are several foliar fungal diseases that can cause yield loss on wheat in Southwest Missouri.

According to Laura Sweets, MU Plant Pathologist, leaf rust, strip rust and Septoria leaf blight are diseases that are likely to cause yield loss.

The incidence and severity of these foliage diseases will depend on the weather conditions during the growing season. The susceptibility of the variety to each of these diseases and the amount of inoculum in each field will also determine the severity of disease infection.

Most wheat foliage diseases are favored by warm, wet conditions. Frequent light rains, heavy dews, high relative humidity and warm temperatures are ideal for the buildup of foliage diseases.

It is important to scout wheat fields for diseases. Growers should know the difference between viral and fungal diseases.

Several fields in the area are showing signs of viruses, but only very limited fungal pathogens have been found. Fungicides will have no effect on viral diseases.

If fungal diseases are threatening to infect the flag leaf, then applying foliar fungicides is a good practice, but farmers need to identify the disease and the severity before they make that determination.

For more information on applying foliar fungicides to wheat contact Jay Chism at 417-682-3579.

Helmets Revisited

by Ed Browning

An article appearing in the "U.S. News and World Report," reported by United Press International, says "Repealing Motorcycle Helmet Laws Leads to More Deaths." The reporter wrote that states which have repealed universal helmet laws in the last 10 years have seen an increase in deaths caused by motorcycles. Death rates in these states have risen an average of more than 12 percent. States that have universal helmet laws average a little over 11 percent fewer deaths than states with no helmet laws, according to a national study. "Death rates in states with partial helmet laws weren't statistically different from rates in states with no helmet laws, said researchers from the University of Missouri Truman School of Public Affairs and the University of Tennessee in Knoxville."

Helmets are less than comfortable; they're hot in the summer, heavy and can be a bit cumbersome. It's somewhat understandable why people, especially youth, don't like to wear them. However, they're rather like seat belts in that they save lives as these statistics indicate. Yet, we let our kids ride ATV's without them.

Unless Missouri law changed last year when legislation was introduced to repeal the law for those over age 21, helmets are still required for youth under 18. A couple of weeks ago, while out on a farm visit, I witnessed two youth—probably teenagers—riding an ATV on a public road without helmets. Here were two, maybe three safety, if not legal, violations. One, of course, was riding without a helmet. Another was using an unlicensed four-wheeler on a public road and lastly, allowing a passenger.

Some might suggest that a four-wheeler could be considered a farm implement just like a tractor, goes less than 30 miles per hour and therefore doesn't require a license. Whether or not that would be a defense strategy in court, I would argue that in this case it appeared to be used for recreation. The next argument is that we should have the freedom to make a choice. That was debated with seatbelt use and most of us have been convinced that seatbelts save lives.

The next time your son, daughter, grandchildren, you or your spouse get on a motorcycle or ATV, wear a helmet and fasten the chin strap. As Roger Miller once sang "…knuckle down, buckle down, do it, do it, do it!"

Farm Tax ID

by Ed Browning

Every year, usually around springtime, we receive calls about where to get a farm tax id. There are two types of issues with this. First, if you are selling a product as a supplier to a consumer, you more than likely need a sales tax number in order to collect the sales tax and render to the Missouri Department of Revenue. The other would be to declare exemption from paying sales tax on agricultural on certain supplies and equipment. Typically these calls are in regard to the latter.

Exemption from paying sales tax on agricultural purchases doesn't require an id number, but a form must be filled out and given to each supplier. This form (Form 149, Sales/Use Tax Exemption Certificate) can be found online at <http://dor.mo.gov/tax/business/sales/forms/149f.pdf>. This exemption is addressed in the Missouri Revised Statutes Chapter 144, Section 144.030, Subsection 7, 22, 29 and 34. If you want to read more about items exempted from sales tax, go to MRS 144.030 at <http://www.moga.mo.gov/statutes/c100-199/1440000030.htm>.

Does Synchronization and Artificial Insemination Really Pay?

by Dona Funk

Beef producers know the best genetics are available as semen intended for artificial insemination (AI). Yet fewer than 10% of beef producers use the technology each year. There are many reasons that people do not use estrus synchronization and AI including labor and facilities and many still question if it is cost effective or not.

The use of estrus synchronization and artificial insemination can increase returns by increasing weaning weight (due to both age and genetics), by raising the market price with a more uniform calf crop, and by improving herd productivity with higher quality replacement heifers. They can also reduce costs because fewer bulls are needed and less labor is required during a more concentrated and predictable calving season.

On the other hand, fewer bulls mean fewer bulls available to sell as culls — a reduction in potential income. The need for synchronization products, labor, technicians and perhaps facilities will also increase the cost associated with estrus synchronization and artificial insemination.

When all these impacts are compiled, however, the costs of pregnancy aren't significantly different between natural service and estrus synchronization and AI. Of course, if labor is high, if semen costs are excessive, or if conception rate to AI is low, the cost per pregnancy can dramatically increase.

The benefits of estrus synchronization and artificial insemination will depend greatly on the management of a beef herd. A herd with adequate nutrition, facilities and labor may benefit greatly while a herd lacking in any of those areas may not benefit at all. Careful consideration and proper planning are crucial when implementing these technologies but for many farms, they may be beneficial.

*If you are thinking about AI'ing cattle and would like to use a breeding barn, one is now available for producers in Southwest Missouri to rent. The portable barn is designed to make AI easier and less stressful. Cattle stand quietly in a darkened stall and the inside working conditions are ideal for all weather conditions. The portable barn is easily moved from one herd to the next, so if you are interested in learning more about the breeding barn or renting the barn, please contact your livestock specialist.

Clean Private Water Wells after a Disaster

by Robert Schultheis, natural resource engineering specialist, Webster County

If a private water well has been flooded or damaged by storms, the well and entire water system should be cleaned and disinfected. Floods can contaminate wells with silt, raw sewage, oil and disease organisms.

First, remove silt and debris from the well and examine the casing, motors and pumps, piping, electrical and other system components for damage. Consult a serviceman if damage is extensive or if you are unable to make repairs.

The following steps should be taken to disinfect a well:

- Pump the water until it is clear.
- Scrub and disinfect the pump room and wash all equipment with at least a two percent chlorine solution. Laundry bleach is usually five percent chlorine, so mix 1 gallon with 1 1/2 gallons of water.
- Remove the well seal or plug at the top of the casing. Pour a solution of one quart of laundry bleach and three gallons of water into the top of the casing. Leave it there at least fours hours, preferably overnight.
- Pump the chlorinated water through the system. While filling all piping, open one faucet at a time until there is a strong chlorine odor at each faucet. Close the faucet and leave the chlorine in the piping at least two hours, preferably overnight.
- Pump and flush the system until the taste and odor of chlorine are no longer present.
- Have the water tested. Boil or treat all drinking water until the water test indicates the water is safe for all purposes.

Machinery Cost

by David Whitson

I have been receiving a lot of calls recently about the cost of custom farming operations. We all know that fuel cost has increased greatly as well as the cost of repairs and new replacement machinery.

For years the University of Missouri has used a survey of farmers performing custom operations to help operators determine the cost of farm machinery operation. The problem with that process is that when prices of fuel and machinery are increasing rapidly, the results of the survey can fall way behind the actual cost.

The cost of baling hay is just one example of questions that operators have now. The last University of Missouri Survey taken in 2006 gives the following numbers. Keep in mind that operators often charge more on smaller acreages. The prices are based on a per acre charge for all operations except baling.

Operation	$ Average	$ Range
Mowing	9.00	5.00 - 15.00
Conditioning	12.00	10.00 - 20.00
Mow-condition	11.11	6.00 - 20.00
Rake	4.30	2.00 - 10.00
Tedding	3.86	2.00 - 6.00
Small Square bales	.52	.30 - 1.00
Large Round bales		
750-1000 lb	7.76	5.00 - 12.00
1000-1500	8.39	6.00 - 12.50
1500 plus	9.07	7.00 - 11.00
Mow-rake-bale option		
1000-1500 lb	14. 14	10.00 - 20.00

Another survey is being completed for later this summer, but how do you adjust prices to meet the current cost?

When adjusting the rates you will need to consider increased fuel cost, increased repair cost and the increase in the cost of twine, wrap or wire.

Here are some common usages of fuel per acre for some of the haying operations based on gallons per acre. These are figures from Iowa State University and the amounts may be higher for some tractors.

Operation	Gasoline	Diesel
Mowing	.49	.35
Mow-condition	.84	.60
Rake	.35	.25
Bale	.35	.25

As for replacement cost for depreciation and repairs, I believe that you would need to use a figure of 6-8 percent increase since 2006.

Another question related to this cost of harvesting hay is what a bale of hay will be worth. For most of us, you probably do not want to know the answer to that question.

If you have 15 to 20 dollars in mowing, raking and baling a large round bale, then you need to add the cost of the fertilizer removed and a land charge to cover all cost. It makes no difference whether you put fertilizer on this year or not, the hay removes nutrients that is not replaced as in the case of grazing.

A ton of grass hay removes 36 pounds of nitrogen, 14 pounds of phosphorus and 48 pounds of potash, which can amount to another $40 to $50 per ton of hay.

When it comes to baling hay, you may want to consider better grazing management and the purchase of needed hay.

Is Fescue a Good Hay Crop?

by John Hobbs

Tall fescue has a reputation of being poor hay, but most of the reason for the reputation is fescue hay is baled too late in the growing season.

Anytime a cool-season plant matures, forage quality drops rapidly. Crude protein will **drop up to 0.5% per day** from boot stage to mature seed stage.

Table 1 shows the effect of stage of maturity on hay nutrient content and animal performance. Hay that is cut at an earlier stage of maturity is lower in fiber. This increases digestibility and enables cattle to eat more of it. As a result of higher intake of more digestible forage, animal performance is much higher. Note in Table 1 that Average Daily Gain is almost a full one pound higher for early vs late-cut hay.

Table 1. Effect of stage of maturity of fescue hay on feed quality and animal gain

Stage of Harvest	% Crude Protein	DM Intake Lbs/Day	Percent Digestibility	Lb of Hay per Lb Gained	Gain per Day, Lbs
Late Boot to Head, cut	13.8	13.0	68	10.1	1.39
Early Bloom (10% shedding Pollen), cut	10.2	11.7	66	13.5	.97
Early Milk (seed forming)	7.6	8.6	56	22.5	.42

The secret of quality fescue hay is adequate fertility and early cutting. Fescue hay should be cut in the boot to bloom stage in this area to ensure a high quality. Cutting the grass for hay at this stage also results in lower levels of the endophyte in the hay. To ensure high quality, fescue hay should be cut in May in south Missouri.

Hay should be harvested in such a way that the time between mowing and baling is minimized. Substantial dry matter losses occur every day the hay remains in the field. Hay crops should be handled carefully to maintain a high quantity of leaf content. Because the leaf is the most delicate part of the plant, it dries much faster than the stem. If hay is too dry when it is worked, such as with a tedder or rake, many of the leaves will fall off. Much more protein and energy are found in the leaf, so management to retain a high leaf content is important to the feeding value of the hay. This is much more of an issue with legumes than with grasses.

Dry matter (or moisture) percentage of hay is critical to its quality. Forages, particularly the legumes, should not be raked or tedded when they fall below 35 to 40 percent moisture. The final drying (from 35-40 percent moisture down to 18-20 percent) should occur in the windrow. Moisture in the hay crop should be no higher than 18 to 20 percent when baled. Hay that is wetter than 18 to 20 percent will mold in the bale, thus reducing both nutrient content and animal acceptability. However, if hay is baled at much less than 12 to 15 percent moisture, there is significant leaf loss due to the handling of this very brittle crop.

Hay made late is not only low quality, but also may contain higher levels of toxins, which reduce animal performance. Cut fescue when it starts to show a few heads. Delaying haying to get a seed crop will result in very poor quality forage. Another thing to remember is quality hay saves money next winter when additional protein is added to a cow's diet because the low quality hay will not meet the nutritional needs of the cow. Quality hay does save money.