



Ag Connection

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Taxation Tidbits – 2009	
<i>(source: Parman R. Green, Ag Business Mgmt. Specialist)</i>	
Maximum Self Employment (Social Security) earnings	\$106,800
Recovery period for most new farm machinery & equipment	5 years
Section 179 expensing amount	\$133,000
50% first-year bonus depreciation	NA
Standard business mileage rate	\$0.55
Annual Gift Exclusion	\$13,000
Federal Estate Exemption	\$3.5 million



Central Region Winter Crop Conference

February 2, 2009
8:00 a.m.

Martin Community Center, Marshall, MO

Crop Management Strategies in a Era of increasing Input Cost.
This years conference will focus on:

- Fertilizer Decision Making
- Protecting Valuable Seeds
- The problem of increasing crop inputs
- Disease Incidence & Season Weather Variability
- Economical Weed Management in Corn and Soybean



Registration is \$20 includes Proceedings, Meal, Refreshments

Pre-registration is required for more information contact
Morgan/Moniteau Co. MU Extension Office (573) 378-5358
Or your local MU Extension Office.

Ag Connection is published monthly for Central Missouri Region producers. Ag Connection can be found on the Internet at: <http://extension.missouri.edu/agconnection/index.htm>. Editorial board: Joni Ross, Managing Editor; Kent Shannon, Parman Green, Mark Stewart, Jim Jarman, Todd Lorenz, Wendy Platt, Mary Sobba, Gene Schmitz, Dee Cooper, Jim Quinn, Wayne Crook, Dustin Vendrely. Please send your comments and suggestions to the editor, University of Missouri Extension, 100 E. Newton St. 4th Floor, Versailles, MO 65084, email: rossjo@missouri.edu or call 573-378-5358.

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Ag Connection

Your local link to MU for ag extension and research information

Ergot in Hay

This spring and summer was an ideal time for ergot development on grass seed. Ergot contains alkaloids toxic to animals. The disease from eating ergot in hay or feed is called ergotism. Some other effects concern its being a source for lysergic acid diethylamide or LSD. The toxic alkaloids produced are similar in ergot and fescue endophyte.

The ergot spores mimic pollen. When cool weather conditions slow flowering of grasses and frequent rains during pollination carry ergot spores into grass flowers, the fungus is more common. Infected seed heads may have empty sections but more obvious are the dark, oversized growths taking the place of seeds. Ergot looks like horn or banana shaped purple-brown structure. These may be mistaken for mouse or rat droppings when they fall out of the seed head or are separated during combining. This is a bad year to use screenings as filler in livestock feeds.

Most of our forage grasses can get ergot growing in their seed heads. This makes hay from grasses other than fescue not a perfect way to avoid problems similar to fescue toxicity.

The fescue toxin-like symptoms include: cattle will look identical to fescue foot and get summer slump plus abortions; swine may have agalacita, early parturition and still births; sheep will get necrosis of the tongue, glitis and dry gangrene; poultry will get comb gangrene; and horse syndromes are also like fescue toxicosis with agalactia, dystocia, dysmature folds, thickening of the placenta and abortions plus dry gangrene. Also, livestock may act abnormally. Therefore, feeding hay that was allowed to go to seed before harvest should be checked for ergot. Fescue hay allowed to go to seed before harvest may be doubly infected.

There is some good news. The longer hay was allowed to cure and the longer it is stored, the lower the amount of ergot and endophyte toxins present. They still may not be low enough to avoid toxic symptoms especially if we have a cold winter.

Another way to reduce the toxins is using anhydrous ammonia treatment which also improves the nutrition and palatability of low quality hay. The University of Missouri Extension Center has information on how to treat hay with anhydrous ammonia.

Baleage made from ergot infected hay may not be as detoxified as more typically cured or dried hay. The ensiling process is not perfectly uniform in all cases. Research on baleage shows toxic level variation from different years, fields, baling and ensiling methods and other unknown factors.

Livestock showing symptoms of ergotism or fescue toxicity should be removed from the source of ergot in order for the toxins to dissipate. There is no other form of treatment.

Source: Jim Jarman, Agronomy Specialist

Did You Know?
Historical accounts from the extended cool years of the middle-ages in Europe tell of people having conditions similar to livestock with ergot poisoning and even entire villages seeming to go crazy. Witch hunts in Europe and the Salem witch trials are said to be a result of ergotism. Both St. Anthony's fire and St. Vitus' dance diseases are from ergot poisoning.



University of Missouri,
U.S. Department of Agriculture
& Local University Extension
Councils Cooperating

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New Herbicides for 2009

Several new herbicides have been approved for use over the past year. Some were available for use in 2008 and others will be available for the first time for use in 2009. Following is a brief description of each herbicide and what it offers.

Balance Flexx is labeled for corn and seed corn. It is soil applied through the V2 stage of corn and is typically tank mixed with atrazine. Once corn emerges, only atrazine can be added. Balance Flexx is targeted at broad spectrum grass and broad leaf weed control. It has the potential to be weak on heavy grass populations.

Corvus is labeled for corn. Corvus is soil applied through the V2 Stage of corn and typically is tank mixed with atrazine. Once corn emerges only atrazine can be added. Heavy populations of large-seeded broad leaf weeds may be a challenge.

Dupont has two new “Q” products available. Accent Q is nicosulfuron with a safener that can be applied to corn post-emergent up to 20-inch or V6, whichever comes first. Steadfast Q is nicosulfuron, rimsulfuron and a safener that can be applied to corn post-emergent up to 20-inch or V6 corn, whichever comes first.

Ignite contains glufosinate-ammonium and is the same active ingredient in Liberty. Ignite contains 2.34 lbs per gallon while liberty contains 1.67 lbs per gallon of active ingredient. Ignite is labeled to be applied to **LibertyLink** soybeans and corn. Use rate is limited on an annual basis. For burn down, 29 to 36 fl oz is used but no additional applications in LibertyLink crops if a burndown is made. In crop applications of 22 oz/Ac per application with a maximum of 44 ounces for the cropping year are allowed. The label also allows a one-time post application rate of 36 fl oz/ac on soybean. Ignite requires the additive AMS at 8.5 lb/ 100 gallon.

Ignite 280SL is expected to be available in 2009. Ignite 280SL is targeted for **LibertyLink** soybeans. For soybeans it can be applied from emergence up to but not including bloom growth stage. There cannot be more than two applications and 44 fluid ounces per season. If Ignite 280SL is applied as a burndown, no additional Ignite applications can be made in crop. Glufosinate is not glyphosate, waiting too long to control weeds will result in disappointing weed control.

Cadet is a new post-emergence broadleaf herbicide from FMC. It is labeled for corn from the 2 leaf stage up to 48 inches and for soybeans from the 1st trifoliolate through full flowering. This was a common tank-mix with glyphosate in RR soybeans in 2008.

Spartan Advance is a new product from FMC that is primarily targeted for the sunflower market but also has a preplant or preemergence label in soybean.

Source: Wayne crook, Agronomy Specialist

Hay Quality from 2008

During the 2008 growing season, most of Central Missouri had abundant rainfall. This was good for growing plants, but not so good for curing hay. Many hay fields were very mature when producers were finally able to get into the fields to harvest. Nutrient value of hay is primarily determined by plant maturity. Therefore, 2008 hay quality will most likely be poorer than normal.

Grass hay samples collected by Gene Schmitz (MU Extension Livestock Specialist) in Central Missouri from 2004 to 2006 averaged 14.4 percent crude protein (CP) and 53.1 percent Total Digestible Nutrients (TDN). Samples collected from the 2008 hay crop averaged 6.9 percent CP and 47.3 percent TDN. This represents a 52 percent reduction in protein content and an 11 percent reduction in TDN compared to averages of hay sampled from previous years.

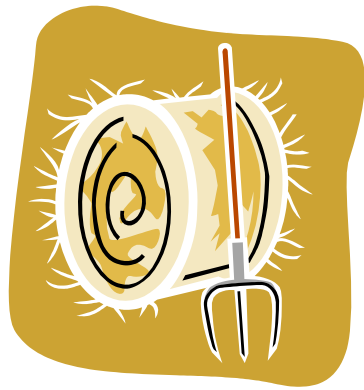
The protein requirement for a 1200 pound beef cow two months prior to calving is about 8 percent. This increases to 10 percent at calving for a cow with moderate milk production. The TDN requirement for a 1200 pound cow two months prior to calving is 52 percent and increases to 59 percent after calving. For dry beef cows, the average 2008 hay crop is 12 percent below their requirement for protein and 10 percent below their requirement for TDN. For lactating beef cows, it is 30 percent below their protein requirement and 20 percent below their TDN requirement.

Central Missouri producers have access to a variety of ingredients, such as grain and grain by-products, to supply nutrients to overcome nutrient deficiencies in hay. However, these feed ingredients may be more expensive than in past years. Therefore this year more than ever, it makes economic sense to sample your hay supply. Your area livestock specialist can help develop a least-cost supplementation strategy to meet the nutrient needs of your beef cow herd.

Source: Gene Schmitz, Livestock Specialist

Taking Land Out of CRP

Information from the USDA indicates that 3.5 million acres in 2009 and 4.0 million acres in 2010 will have expiring CRP contracts. The economics of taking ground out of CRP should be a prime consideration as well as the fact that the land that was put into CRP was environmentally sensitive or highly erodible and needs to be protected. Current and future prices may temper some of the enthusiasm for taking land out of CRP.



If a producer decides to return the ground to crop production, there are several vegetative management strategies to consider. One of the most effective strategies is a combination of mowing and herbicide application during the summer and fall before the cropping season. Mowing will help deplete food reserves, stimulate active regrowth and promote herbicide penetration into the canopy. When applying herbicides after mowing, weeds should be allowed to re-grow to a height of 6 to 8 inches for best control. In some situations tillage to destroy or bury the vegetation is an option, followed by a burn down herbicide to control escapes and regrowth. One other possible method of vegetation control is controlled burning. This would depend on vegetation type and individual situations. Check on local regulations for burning.

Crop selection will be based on economics of the different crops, pest issues, and stand establishment concerns. Most growers should consider planting glyphosate-resistant crops to aid in managing weeds and clean up of escapes. Each crop has its advantages and disadvantages. Corn or soybeans would probably be the most likely crops in this area.

Corn has advantages in being a strong emerging crop that competes well with annual and perennial weeds. Corn also allows the producer to use atrazine to both control the sod and provide residual control of annual weed species. Corn also allows the use of various herbicides such as Banvel, and 2,4-D to control perennial broadleaf weeds. Also, seed and soil applied insecticides are available to manage soil pests such as wireworms, white grubs and seed corn maggots. Corn produces a lot of residue that may help prevent or reduce erosion.

Soybeans allow more flexibility in planting date than corn. This allows more time for spring vegetation control and for organic matter decomposition. Rodents tend to damage soybean stands less than corn stands. Soybeans are not as susceptible to wireworm and grub damage, but seed corn maggots can be a serious problem.

Soil fertility is another consideration. Research studies indicate that soil pH and potassium (K) levels change little in 10 years of CRP. Phosphorous (P) levels changed in some studies and not in others. A soil test will indicate what is needed. Organic matter may increase during CRP and up to half of the nitrogen (N) in the organic matter may be released over several years. However, this N may be released too late for plant use or tied up by the residue and not be available for the plants to use.

Make sure your planter is in good operating condition. Heavy residue, dense root mass and dry, hard or uneven soils can affect seed placement, seed to soil contact and furrow closure. Use residue management devices to provide a better environment for the row. Make sure the down pressure is adjusted to penetrate residue.

Source: Wayne Crook, Agronomy Specialist

Managing Nitrogen

The price of fertilizer is a continuing concern for producers. Nitrogen (N) source, rate, timing, placement, tillage and weather are all factors that influence how efficiently N is used. There are several ways a producer can fine tune N management.

1. Select the most profitable rate. Nitrogen has a point of diminishing returns above which yields will increase but the N may not pay for itself.
2. Use the cheapest source of N available because all N fertilizers convert to nitrate-N in the soil. When available, anhydrous ammonia is typically the most cost effective source of N.
3. Spring applications are better. The closer to the time that the plant uses the N, the better. Fall application can be more convenient, but the risk of N loss is greater. Studies in various Midwestern states indicate that losses from fall applied nitrogen can easily range from 10 to 20 %. The N source will also have an effect rate of N loss.
4. If anhydrous ammonia is applied in the fall, wait until the soil temperature at 4-6 inch depth are consistently below 50 degrees F. The use of a nitrification inhibitor in Missouri for both fall and spring applications should be considered.
5. Fall application on sandy and poorly drained soils should be avoided. Sandy soils have a high potential for nitrate leaching; whereas poorly drained soils have a high risk for N loss from denitrification.
6. If a producer uses urea, it should be incorporated within three days. Incorporation may be accomplished by rain or tillage. Urease inhibitors can increase stability, but only for about 10 days.
7. Sidedressing supplies the N at the time when there is maximum need. The maximum N-uptake by corn occurs when the plants are between knee to shoulder height.
8. Make sure that application equipment is operating properly and distributing the fertility in a uniform manner. Spinner spreaders have the highest potential for uneven application followed by anhydrous ammonia applicators and boom-type spreaders.
9. Control weeds early. Research in Wisconsin found that when weed control was postponed until weeds were 12 in. tall, an extra 100 lbs N/acre was needed to produce the same yield as pre-emergent control. An additional 40 lbs N/acre was needed when weeds were controlled at a 4-inch height.
10. Monitor your crop during the growing season. Plant color sensors can help identify N deficiency and fine tune in-season fertilization. This is a developing technology but showing a lot of possibilities.
11. Use N credits. There are N contributions possible from many sources such as residual nitrogen, manure, previous crops such as soybeans and N supplied by phosphorous fertilizers.

Source: Wayne Crock, Agronomy Specialist

