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MFA Lamar



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Check Grain Bins for Quality Issues

By: Diana DeHart - Grain Coordinator

Corn harvest this past fall proved challenging for producers and grain elevators alike. Wet weather and late planted corn did not allow for corn to properly dry down in the field this year. Most of us experienced corn in the 20 percent moisture range for much of the harvest season. Producers tried letting mother nature dry the corn in the fields, but in November we were still faced with stagnant moisture levels at 18 and 19 percent. Storing corn at these higher moisture levels takes extra care and management to insure a quality crop for future sale.



Check your grain bins . Core storage bins by taking some grain out in the near future.

Corn in bins that were aerated and monitored to stay below 30° F, and that had the center cores removed are generally in good condition, while un-aerated bins and piles have already reached 75-100 percent damaged kernels. According to North Dakota State University Extension Service agricultural engineer Ken Hellevang, the estimated allowable storage time (AST) decreases rapidly at warmer grain temperatures. For 22 percent moisture corn, the AST is about 190 days at 30 degrees, 60 days at 40 degrees and only 30 days at 50 degrees. For 20 percent moisture corn, the AST is about 90 days at 40 degrees, and 50 days at 50 degrees.

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Converting Fescue Ground to Crop Ground

By: Jason Worthington - Agronomist for WCAS

Interest in reclaiming fescue sod for crop ground has been very high again this year. Several landowners have been seeking an alternative to pasture and hay to put their ground to use and have looked to row cropping as their answer. Last spring there were a large number of forage fields returned to row crop as a result of high commodity prices. There were several issues that arose as a result. Many of these fescue fields can be productive, but before a grower takes on new ground there are some precautions one must take, especially on ground that has not been in typical row crop rotations.

The first step one should probably take with any field to develop a sound agronomic plan, whether the field is new or not, is to get a comprehensive soil sample. The difference when reclaiming grass for grain production is that grass fertility is too often overlooked. Many of these pastures and hay fields have had limited to no phosphorous and potassium fertilizer for years.

(Continued on page 2)

Special points of interest:

- Check your bins for grain quality.
- New Office and Warehouse at Lamar
- Poultry Litter & Fertilizer Opportunities
- Spring Cattle Management and Minerals
- Soybean Chemical Options

Converting Fescue Ground to Crop Ground (cont. from page 1)

Hay fields tend to be the worst, but soil samples from pastures often come back extremely low in nutrients as well. When corn, soybeans, or wheat are harvested for grain alone a large amount of the P and K the plant uses returns to the soil in the stover.

For example a hundred bushel corn crop removes 25 pounds of K_2O . The same corn crop taken for silage would remove 130 pounds of K_2O . When hay is removed the entire amount of P and K from the plant above ground is harvested. Cool season grasses harvested for hay will remove the equivalent of 50 pounds of K_2O per ton and 12 pounds of P_2O_5 annually. This combined with under fertilization of the field can lead to disastrous results for a subsequent row crop.



The next decision a grower should make would be proper seed selection. Fescue ground is usually in fescue for a reason. Very often it is marginal crop ground. Marginal ground can be productive, but it is essential that you look for a tougher hybrid or variety. Short seasoned corn with defensive characteristics, and mid to long maturity beans for your area with defensive characteristics are often good choices. There are several other factors to take into account with seed selection though so make sure to consult with your seed dealer about any specific issues the field will present.

(Continued on page 3)

Included are some pictures of K deficient soybean plants. These photos did not come from a reclaimed sod field, but K deficiency was a very common problem this past year in converted fescue fields.



Converting Fescue Ground to Crop Ground (cont.)

The first year back into crop production presents a few other problems as well.

The next one, specific to soybeans or other legumes, is the absence of rhizobacteria. Rhizobacteria are the microbes responsible for infecting soybean roots, creating nodules, and producing nitrogen for the plant. Populations of rhizobium decline to ineffective levels without the presence of a host plant such as soybeans after just a few years. This problem is easily overcome simply by inoculating soybean seed with a quality soybean inoculant such as Optimize.

Insect pressure is an issue growers encounter regularly, but fescue sod provides an excellent habitat to a few pests in particular. Among these are wireworms. Wireworms are the larvae of the click beetle, an insect that loves grass.

A second grass loving pest is grubs, the larvae of May beetles (June bugs) and other beetles. These pests are rare problems in soybeans due to high planting rates, but can occasionally be present in dense enough populations. CruiserMaxx seed treatment to soybean seed is an excellent tool in controlling or at least suppressing these pests. Grubs and wireworms are a more common corn pest, but corn seed almost always comes with an insecticide seed treatment as an industry standard now. It never hurts to double check with your seed dealer though.

One last major concern when converting pasture or hay ground is weed control. The fescue or other grass being destroyed has become a weed in this situation. A glyphosate application at green up followed by a second application when new growth occurs usually does an excellent job. The problem that often occurs when attempting to no-till a crop into fescue is the desire to take one last hay crop and plant into the grass. This can be effective, but weed control can become more difficult.

At this point in the year it is much more difficult to control a perennial cool season grass such as fescue. The grass is not growing rapidly and environmental conditions can cause control to be more difficult. It is essential to let the grass gain some regrowth before making this application. A shot of glyphosate will do nothing to a freshly cut field. At least one subsequent application is usually necessary to clean up spots that are poorly controlled.

Another tool to aid in weed control is to identify weed pressure present in the grass before planting. Many “pasture” weeds are difficult to control with common herbicides used in corn, beans, or wheat. Growers should anticipate weed pressure they are not used to seeing and may not be able to rely on glyphosate alone.

Just like anything else, reclaiming sod presents several challenges. They can be overcome it just takes some problem solving and careful planning. If you have questions about reclaiming a grass field or anything agronomically make sure to contact your MFA, Ag Choice, or West Central agronomist.

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Check Grain Bins for Quality Issues (cont. from page 1)

Charles Ellis, University of Missouri Extension ag engineer, warns that temperature differences in a bin of stored grain causes moisture to migrate from warmer to colder areas. Warm air rising in the center of the bin cools when it reaches the cold grain near the surface. Ellis says this results in moisture condensation near the surface and leads to rapid spoilage when the weather turns warm. Hellevang stated in a news release, “Warming of the grain will normally be limited to a couple feet near the bin wall and a few feet at the top of the bin. Monitor grain temperatures in these locations to determine when to operate the aeration fan. Bin temperature cables help monitor grain temperatures, but they only detect the temperature of the grain next to the cable. Grain has an insulation value of about R1 per inch, so grain insulates the cable from hot spots just a few feet from the cable.” He urges producers not to rely on air temperatures to determine when to aerate corn. The daily total solar energy heating the south side of a grain bin on Feb. 21 is more than twice as much as on June 21. Also, the amount of solar energy heating the bin roof is about equal. Therefore, corn next to the bin wall may be much warmer than the outdoor air temperature. Bottom line, CHECK YOUR BINS and take temperature readings.

Here are some tips on aerating corn by North Dakota State University:

- Do not operate the fans during rain, fog or snow to minimize blowing moisture into the bin.
- Bin vents may frost or ice over at temperatures near or below freezing, so leave the fill hole or manhole open or unlatched while operating the fan to prevent damage to the bin roof.
- Cover aeration fans when they are not operating to prevent wind from warming the corn. Wind blowing into an uncovered aeration fan or duct will aerate the corn, warming it to temperatures near the daily maximum. This occurs because more wind tends to blow during daylight hours than at night.
- Corn at moisture levels exceeding 21 percent should be dried in a high-temperature dryer during February or early March to minimize the potential for grain deterioration. Natural air drying is not efficient until the average outdoor temperature reaches about 40 degrees. The moisture-holding capacity, and therefore the drying capacity, of colder air is so limited that drying at colder temperatures is extremely slow.

The active period for grain spoilage begins in mid to late February. Use every opportunity to keep the grain cold. Core storage bins by taking some grain out in the near future. Coring bins will indicate if there are problems starting, such as wet corn bridging over the unloading slide. Once the grain temperature cannot be maintained below 30 degrees, wet corn over 17 percent will have to be dried or sold to prevent spoilage. Natural air will work if the bin has 0.5 cfm/bu or more of airflow and the moisture is less than 20 percent, according to Ken Hellevang. Moisture over 20 percent will require heated air.

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.

At left: Iowa State University research indicates that even 15 percent moisture corn can only be successfully stored without damage for less than 2 months if the temperature of the corn is 80 degrees.

Act NOW to check, move, or dry the 2008 crop. The higher moisture of this crop will make it more difficult to manage than previous years and the longer we wait the more difficult it will be to manage. Damaged corn will be hard to market this year and the damage will quickly get worse if not properly handled.

Poultry Litter as a Source of Fertilizer

By: Cale Smith - Agronomist for Ag Choice

In the last few years, there has been an increase in the use of poultry litter in our area, especially in SE Kansas and SW Missouri. This was brought on by the high fertilizer prices that we saw over the last few years and also because of the poultry producers having to haul litter further and further out of SW MO and NW Arkansas because of excessive amounts of phosphorus in their local soils.

As with most things, there are both advantages and disadvantages of using poultry litter as a fertilizer or soil amendment. Poultry litter varies considerably as far as analysis goes. The variability of poultry litter is due to the source and moisture content of the litter. Broiler chickens, laying hens and turkeys are all sources of litter, and each will vary due to the diet of the birds and also bedding materials. This is the reason litter should be sampled and tested fairly regularly to determine the nutrient analysis and rate of application.

Phosphorus (P₂O₅) content of litter is typically high. Although the phosphorus found in poultry litter is of an organic nature, typically the majority of the phosphorus will be available for plant uptake in the first year. The generally high phosphorus content of poultry litter is the main reason that care must be taken when stockpiling and applying. Runoff and groundwater can be compromised when improperly storing and applying any type of animal wastes.

Potassium (K₂O) levels in poultry litter aren't as high as the phosphorus content, but are still a valuable source of potassium. Like the P content of litter, the majority of K₂O will be available the first year it is applied. Since the majority of litter doesn't contain as much potassium as it does phosphorus, there may have to be applications of commercial potash if soil tests indicate excess phosphorus levels and a need for potassium.

Nitrogen content of poultry litter can be misleading. There are two types of nitrogen found in litter, organic nitrogen and ammonium nitrogen. Both types are a slow release type of nitrogen. There will be a small portion of the nitrogen found in the litter available the first year, but it is hard to put a pencil on exactly how much will be released. In other words, if 1/3 of the nitrogen found in a ton of litter is available the first year (12 months), how much will be available to your corn crop that from start to finish takes 4-5 months. It is my belief that the nitrogen supplied in poultry litter should just be considered a "bonus" in a corn crop, and one should keep with his or her typical N fertilization program. In the last few years I have seen many fields where too much N credit was given on the litter application and corn yields suffered the consequences.

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There are also disadvantages of poultry litter. An 80 acre field will take 200 tons of litter applied at 2.5 ton/acre. That is a lot of material to load and spread in what is sometimes a short period of time between rains.

Aside from the obvious N, P, and K levels in poultry litter, there are also several micronutrients present. Sulfur, zinc, etc, are all present in any type of manure product. Typically if soils are highly deficient in these micronutrients a litter application on its own may not alleviate the need for a micronutrient application via commercial fertilizer sources. Another benefit of litter is that it is basically 100% organic matter. Organic matter is a very important component of any soil. Organic matter has a positive effect on soil structure, tilth, water-holding capacity, aeration, pH buffering, cation exchange capacity, and microbial activity. *(continued on page 6)*

Poultry Litter as a Source of Fertilizer (cont. from page 5)

There are also disadvantages of poultry litter. For those of you who have had experience with poultry litter, perhaps the most obvious of these would be odor. Spreading litter on a day with a strong south wind may not make you the favorite person of your neighbor to the north. Another disadvantage is the handling of the material. An 80 acre field will take 200 tons of litter applied at 2.5 ton/acre. That is a lot of material to load and spread in what is sometimes a short period of time between rains.

Another disadvantage is environmental and health concerns. As mentioned above, care must be used to avoid contaminating ground and surface water. Avoid stockpiling, storing, and applying any manure product near creeks, rivers and sinkholes. As far as health concerns go, the very nature of poultry litter makes it less than sanitary. There can be several bacterial and/or parasitic pathogens found in any litter sample.

Again, there are both advantages and disadvantages to applying poultry litter. One just has to weigh the advantages to the disadvantages and see if it fits into your fertility program. Because of the variability of litter products some of what is written above on the N, P, and K content of poultry litter may seem a little vague since there were no hard and fast numbers used. It is hard to use generalities when talking about any type of animal waste. You have to evaluate and determine your own "hard and fast" numbers to use when working poultry litter into your fertility program. The purpose of this article was to hopefully answer a few questions and perhaps raise some others. As always, be sure to contact your local AGChoice, MFA, or West Central location or agronomist with any questions.

MFA Lamar - New Store, Office and Warehouse

Welcome To Our New Building



For several months our customers have all been very patient as we were in construction of our new building. We are finally done and we are moved. Not totally settled but moved. The expansion consists of an 80 x 110 building and a bulk seed site.

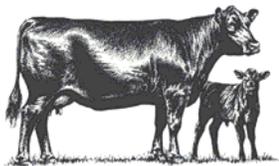
The building has been divided in two parts. The west end houses our new retail facility as well as the grain offices. The consolidation of the two should help us better serve our customers and better utilize our workforce. The east side is all warehouse space as well as all of the existing buildings.

In addition to the new warehouse we also have a new bulk seed facility on site. This will allow us to handle bulk seed beans and bulk seed wheat.

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Managing Spring Nutritional Needs by: Jon Roberts

I don't know about the level of growth, but the color sure is looking a lot more like grass is about here. Hopefully it's about time to blade the ruts and harrow the pastures. People generally like to hear good news and I happen to have a little dab for ya! Our mineral prices have moderated significantly, and the necessary supplementation of vitamins along with MACRO & micro minerals just got a whole lot easier to swallow. Now you don't have to compromise your cattle or your checkbook for "mineral nutrition done right".



Spring calving season is well under way. Be sure to meet your cow/calf mineral needs with MFA's full line of Gold Star Minerals.



When you look at the fundamentals of this beef industry, cattle numbers would indicate that demand should outpace supply in the near future. That smells to me like better markets ahead, but you have to remember, I keep my glass at least half full at all times. None-the-less this calf crop hitting the ground now has the opportunity to be the most valuable in recent times. I don't want you to let your level of management slip to the point that you are not expressing the full genetic potential of your cattle. If you have bought the right bulls; and I have faith in your good judgment; then you're going to want the best nutrition program to capitalize on that bull investment. I already know what you're probably thinking, " Listen, Mr. Feed Man, the route you're talking costs money." Yes sir my friend it does, but let me tell you how to mitigate that cost in a way that will make good sense to you. Almost invariably your most cost effective resources are the ones you produce yourself. If I was a betting man I would bet that you did not put fertilizer on all your hay and pasture acres at a level to cover the removal afforded to us by the generous rain that we enjoyed last year.

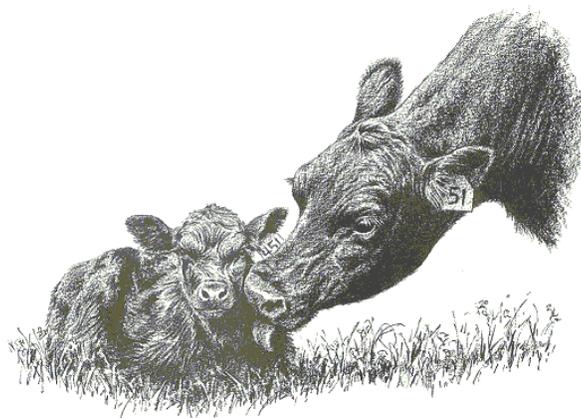


Don't allow input costs to let your level of management slip to the point that you are not expressing the full genetic potential of your cattle.
Almost invariably your most cost effective resources are the ones you produce yourself.

Now, with this year we have the opportunity to correct that deficit with fertilizer prices that are much more attractive. So when you get down to the meat of the nut, you can pay for it now in fertilizer with a little legume seed sprinkled on top. Or pay for it later with purchased feed inputs. My advice would be to do some of both. If you have survived long enough to read this newsletter, then chances are your program isn't broke and don't need fixin. I just wanted to give you a few points to ponder. Regardless of what your purchasing plans are, we at WCAS and Ag Choice want to partner with you to make 2009 the best year it can be.

Now listen close cause this is by far the best advice I can give you. Take time this spring to truly marvel at the miracle of new life and regeneration. I can't begin to tell how inspired I am when in the distance I see a cow off by herself, with a newborn calf testing his legs to get that first milk. Thank God I'm alive and well and living in the USA!

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We're on the Web: www.mfa-inc.com

MFA Lamar - New Store, Office and Warehouse (Continued from Page 6)

We also have a new seed treater that will allow us to treat seed beans and seed wheat and give us better selection of available product at a savings to our customers. We do plan to have a formal open house hopefully some time in May but the date has not been set as of today.

We do invite all of our customers to come in and see our new facility and bring a friend. Our goal is to continue knowledgeable, friendly service to our customers. Thank you for your patience during the building and moving process.

Jesse Medlin **General Manager Lamar Group**

Pictured Below:

New bulk seed bins located on east side of previous warehouse, now used for bagged seed storage.



Pictured Below: Front of new office building.

Pictured Right: New store and show room.

