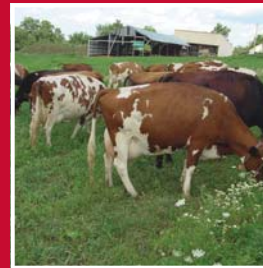


FIELD & FEEDLOT



NORTHWEST AREA EXTENSION

APRIL 2008 ISSUE

Beef News

By Beth Doran, ISU Extension Beef Field Specialist

Lick Tanks and CCDS – Last summer I was involved in a project investigating the use of lick tanks to deliver condensed corn distillers solubles (CCDS) to summer grazing beef cows. The purpose of the study was to determine consumption levels of CCDS provided via a lick tank; to determine sulfur intake and its impact on cow health; and to monitor mold and mycotoxin development in CCDS stored in lick tanks during the summer.

Dry matter consumption of the CCDS ranged from 2.66 pounds (14.8 pounds as-fed at the beginning of the project) to 8.11 pounds (30 pounds as-fed near the end of the project). As hot, dry weather persisted, forage quality and hence, pasture intake declined. This was accompanied by increased consumption of the CCDS.

Dietary intake of sulfur ranged from .43% to .62% of total diet dry matter. The maximum tolerable concentration of dietary sulfur has been estimated at .40% (National Research Council, 1980). Yet, in this study, the cattle did not exhibit clinical signs of acute sulfur toxicity. Cattle health appeared to be unaffected by CCDS intake.

Yeasts were consistently isolated from the assayed samples of CCDS, but very few colonies of filamentous fungi (molds) were recovered. In fact, in most samples, mold colonies were not detected. Mycotoxins were non-detectable for all mycotoxins analyzed, except fumonisins, which were present at low levels in all CCDS samples and likely came from the original grain.

This study would suggest that, if carefully managed, lick tanks may be used to deliver CCDS to summer grazing cows. However, the cows in this project had access to ample quantities of pasture and corn silage. A shortage of additional feedstuffs could alter the conclusions of this project.

A full copy (A.S. Leaflet R2291) of this study is included in the Iowa State University Animal Industry Report 2008. You may access the Animal Industry Report from the following website: www.iowabeefcenter.org. Select research and publications on the left hand side and then scroll down to Animal Industry Reports.

Cows and Plows – This spring is going to be interesting. The growth in bio-fuels has increased the demand for corn. The lower value of the U.S. dollar encourages U.S. agricultural exports - not only for beef, but also for grains. High demand support high grain prices, and this encourages farmers to shift acres from grass and hay to row crop.

So – if a cow-calf producer doesn't want to sell cows, are there some management changes that will allow him to run the same amount of cows on less acres? The answer is yes. The Iowa Beef Center has put together a series of fact sheets dealing with this topic.

There are several changes in management that can increase carrying capacity of the pasture. Additional nitrogen can boost the carrying capacity as much as 30-40%, especially with grasses. Fertilizer can be directly applied each year or a legume can be interseeded every third year into the grass.

Changing the forage mix can boost productivity. This might involve adding a tall grass or a legume. This can increase the carrying capacity by about a third.

Managed intensive grazing can increase forage productivity. Producers can expect a 10-15% increase in productivity with a 3 to 5 paddock rotation or a 15-25% increase if more than 5 paddocks are rotationally grazed.

Another alternative might include supplementing cows on pasture or removing the cows from the pasture and feeding them in a lot or sacrifice area during part of the summer grazing period. A producer may want to consider early weaning of the calves when feeding cows in a dry lot. In general, reducing weaning age from 180 to 150 days would require 5-10% less grazed acres.

The Cows and Plows fact sheets can be accessed at the Iowa Beef Center website listed above. Select research and publications and scroll down to fact sheets. This will bring up alternative systems for beef cows with high land costs, which contains the Cows & Plows articles.

Swine Production Cost

By Dave Stender, ISU Extension Swine Field Specialist

Feed cost for swine operations has rapidly risen to record high levels in a short period of time. This is poor timing for the swine industry as advances in a vaccine to prevent circo virus death loss hit while the swine industry is in expansion mode. The resulting hog numbers have been running about 10% over last year since the fall. Producers now find themselves faced with relatively low hog prices while simultaneously trying to deal with more than double feed cost of production.

The National Pork Board has developed a pork check-off publication for pork producers that outline practical ideas to address high feed and production costs. The publication points out that decreasing feed and production costs is very complex and should be considered carefully. Producers should focus on production practices that optimize feed costs and efficiencies while maximizing profitability.

Included in this article are several topics.

Decreasing the particle size of feed, every 100 microns change in size will impact feed efficiency by 1.2%. Stomach problems in the pig can happen if the feed is ground too fine, but most operations don't have problems as long as the micron size is above 600. Wet-dry feeders may reduce wastage along with adjusting the feeders and replacing worn feeders. Other feed management tips include feed budgeting, using least cost formulations, phase feeding, proper pre-slaughter feed withdrawal and targeting nutritional needs.

Some producers are looking for alternative feed ingredients such as the distiller grain by-product, glycerin by-product of the bio-diesel manufacturing, bakery products and others. In these cases the producer must determine the nutritional profile and its feeding value before using it.

Additives to a swine diet should be carefully considered. Producers could be adding antimicrobials, enzymes, acidifiers, crystalline amino acids, animal protein, fat, milk products, whey, spray-dried blood meal, oats and other ingredients. Each addition should be evaluated often and included based on current economics. Rations should be reformulated as often as ingredient prices change.

Reducing environmental stressors continues to be a management strategy to improve health, increase gain and efficiency while lowering morbidity and death loss. Care for the pigs includes proper stock density, keeping the correct temperature, proper ventilation, humidity, and minimizing extreme temperature swings.

Other ideas suggested were to make an increasing effort in achieving higher herd health, to learn how to reduce transport losses and fatigued pigs and to study the optimum sale weight

based on your operation's final stage feed efficiency in relation to the packer grid. Check out the Iowa Pork Industry Center web site at: <http://www.ipic.iastate.edu/homepage.html> to download simple spreadsheet sale weight calculator.

Summary on Fungicide Application to Soybeans

By Paul Kassel, ISU Extension Field Agronomist

The following summarizes the research on fungicide application to soybeans that has been conducted in Northwest Iowa in 2005, 2006, and 2007.

The interest in the use of fungicides on soybeans has increased since 2005. This interest is based on 1) the threat of Asian soybean rust and 2) the idea that fungicides may increase yields without the presence of leaf disease.

Studies from the Northwest Iowa Research Farm at Sutherland

- ◆ One study showed an advantage to Headline application at the R3 stage of soybean development, versus R1, R2, or R4 stages of development.
- ◆ One study showed an advantage of over 4.0 bu/a when Headline was applied to Northrup King S23-Z3 and Asgrow AG2403 in 2007. All four varieties responded in 2006 – including Pioneer 92M32 and Kruger 223+RR as well as S23-Z3 and AG2403.
- ◆ A fungicide/insecticide study in 2007 showed a 12.8 bu/a response to Warrior insecticide (due to high aphid levels), but no response to the fungicide application.
- ◆ The average yield response to fungicides in 2005 to 2007 with four different studies showed a 1.7 bu/a response.

Studies from the On-Farm Research Project in Sioux, Lyon and Osceola counties in 2006 and 2007

- ◆ Twelve replicated studies conducted on farmer's farms showed a 0.9 bu/a overall yield response to fungicide applications.
- ◆ Three of the locations showed statistically significant yield responses. Two of those three locations had yield levels in the 70 bu/a range.

Clay County Growers plot in 2005, 2006 and 2007

- ◆ One study in 2005 showed a significant yield increase from Headline but not Quilt.
- ◆ One study in 2007 showed a yield increase from Headline, Warrior plus Headline, or Warrior alone to Northrup King S19-L7 (a defensive SCN variety). However, Northrup King S21-N6 (higher yield potential, non – SCN variety) did not respond to Headline and/or Warrior.
- ◆ Averaged all together, fungicide applications to soybeans showed a 2.2 bu/a yield increase.

North Iowa Research Farm, Kanawha.

- ◆ Two different studies showed a yield increase when Headline was applied at the R3 stage of development as compared to the R1 stage of development.
- ◆ One study of Headline application to four different varieties showed that two of the four had significant yield increases one year of the study.

Summary

- ◆ The average yield response of the 23 fungicide experiments that are listed above showed a 1.8 bu/a yield increase.
- ◆ Twelve of the 67 (18%) comparisons analyzed above showed a statistically significant yield increase. The average of yield increase of those 12 experiments was 3.8 bu/a.

Using this information for 2008

- ◆ This data shows a 1.8 bu/a overall yield advantage in northwest Iowa for experiments in 2005, 2006, and 2007. This data was obtained when there was very little leaf disease present in any of plots (mostly dry summers).
- ◆ Fungicide applications may increase yields without the presence of leaf disease.
- ◆ Some soybean varieties respond to fungicide applications and some do not – the reason is not well understood.
- ◆ Fungicide applications may be profitable if farmer applied, possibly in conjunction with insecticide and/or herbicide applications.
- ◆ Soybeans may respond to fungicides when soybean yield levels are at the 60 bu/a plus yield levels. A couple of locations showed significant yield increases when yield levels were in the low 70's.

Private Party Purchases

By Tom Olsen, ISU Extension Farm Management Field Specialist

Any farm operator would like to be confident when buying farm equipment or farm products, that the assets are "free and clear" of any financial encumbrances. This is typically not an issue for titled vehicles or real estate, since liens (or mortgages) are specifically recorded at the county courthouse. Dealerships and auctions also have means to assure lien-free property.

The issue is with buying non-titled farm assets from a neighbor or across the state. If the sale proceeds are not delivered to the lien holder, the assets could be seized by the mortgagor for debt payment. Good business practice would call for a few steps to assure a successful private party purchase.

- ◆ Do a lien search on the seller at the Secretary of State's web site: <http://www.sos.state.ia.us/Search/UCC/search.aspx?ucc>. This state database will show which lenders have declared liens on which assets of the seller. In a typical farm operation with

a bank loan line-of-credit., there will be a "cover-all" security statement that will start off like, "All farm products....." This blanket security clause basically collateralizes whatever asset is being purchased.

- ◆ If there is a financing statement that includes the purchased asset, a release should be received from the lender. This can be either a written release sent to the buyer or a release on the specific asset filed at the Sec. of State's office. A simple solution could be to ask the Buyer, "Who is your banker? Will he give me a lien release?"
- ◆ Use a bill of sale. It should include the buyer and seller, asset description with serial nos., quantities such as bushels or lbs., and dated signatures of both buyer and seller. Small-ticket items, perhaps do not need this formal documentation. A decision may be made that the risk assumed is less than the hassle. Also many times, a documented call to a lender may give the buyer sufficient confidence.

EPC Limits Application of Manure on Soybean Ground

By Kris Kohl, ISU Extension Ag Engineer Field Specialist

The Environmental Protection Commission of the Department of Natural Resources met on March 12 and voted to limit the amount of manure applied to ground that will be planted to soybeans. The total nitrogen applied cannot exceed 100 lbs. / acre.

The restriction goes into effect on May 14, 2008. The restriction represents about 1/2 of the former legal maximum application to soybeans. The commission will vote again on the matter in 5 years or 2013.

The impact on most livestock operations is likely to be minimal because:

- ◆ Few producers apply manure before soybeans.
- ◆ Changing to corn on corn will allow for about 25% more nitrogen application.
- ◆ Fertilizer prices are high and crop farmers are seeking manure from neighbors to reduce expenses.
- ◆ Manure test values have decreased because of changes in feed protein levels.

Recommendations for livestock producers:

- ◆ Test your manure before applying.
- ◆ Update your manure plan before fall 2008 to reflect the new rules, including the additional land of neighbors who want your manure.

OSCEOLA COUNTY

Al Grigg, County Extension Education Director
Ron Hook, ISU Extension Farm Management Field Specialist
Kristin Pedley, Office Manager
Jodi Nasers, County Youth Coordinator
Robyn Kruger, Program Assistant

County Website:

For your convenience in accessing extension information, go to our county website:

www.extension.iastate.edu/osceola/

Think Spring!

Maximize Soybean Yields:

ISU Extension Soybean Specialist, Palle Pedersen, says that to maximize soybean yields in Iowa, farmers must consider seven different factors. Producing high yielding soybeans is achieved through a combination of optimizing all manageable variables and making the right agronomic decisions to reduce stress. The following are the seven steps needed to maximize your soybean yield no matter where your farm is located.

1. Variety selection is the most important decision. Producers must select high yield varieties with agronomic traits that match the ever-changing stresses in each field.
2. Soil test and manage soybean cyst nematodes. SCN is the greatest limiting factor of soybean yield in ISU research. Up to 40% yield reduction can occur without visible above ground symptoms.
3. Plant early, when the ground conditions are ready.
4. Plant in less than 30 inch rows.
5. Manage weeds early. Perhaps use a pre-plant burn down herbicide with some residual control.
6. Remove plant stresses from yield robbing insects. Weekly scouting is a must to help minimize the impact of in-season stresses that can rob "easy bushels".
7. Soil fertility tests should be conducted at least every other year to verify the appropriate fertility levels.

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IOWA STATE UNIVERSITY
University Extension
Osceola County Extension Office
839 3rd Avenue
Sibley, Iowa 51249