

February
2007



Animal Industry News Update

from the LCES Animal Science Specialists

Animal Health (Dr. Christine Navarre) **Get Ready for Winter Now**

Producers need to be aware of the potential health problems that can arise in the winter and try to do their best to prevent them.

Winter Grazing Problems

Producers who will be grazing ryegrass or other winter annuals should be ready to supply high magnesium trace minerals to prevent grass tetany (hypomagnesemia) in beef and dairy cattle. Signs are nervousness, aggressiveness, lack of coordination, muscle tremors or twitching, and finally seizures and death. Medication also can be put in mineral mixes to prevent bloat, but that is not always effective. Limit grazing, when cattle are first turned out, can prevent bloat. Also, under certain conditions, nitrate and prussic acid (cyanide) toxicity can occur with winter annuals.

Problems When Feeding Stored Hay and Feeds

Protein energy malnutrition (pregnancy toxemia) occurs in cattle and small ruminants that are underfed protein and/or energy. This occurs most commonly when cattle are wintered on poor quality grass hay with little or no supplementation. This condition is exacerbated by internal parasites and cold weather, which increase nutritional requirements. Cattle are normal one day, and down and unable to rise the next, especially after a cold spell. Once animals go down, treatment is usually unsuccessful. Preventing this problem with adequate nutrition is best. Make sure to have hay tested so a good supplement can be selected.

Poor quality forages alone or in combination with grains can cause mineral imbalances and lead to winter tetany. High levels of potassium (K) and phosphorous (P) when coupled with low levels of magnesium (Mg) and calcium (Ca) can result in a Mg deficiency. Angus cattle are most susceptible, and Brahman cattle are least susceptible. Stress, such as severe weather, hauling or handling, can induce clinical signs. Lactating cattle are more susceptible. "Winter tetany" can cause clinical signs identical to grass tetany. Winter tetany also can cause clinical signs identical to "milk fever." These signs are a stiff gait that progresses to weakness and loss of ability to rise. To determine the risk of winter tetany, a tetany ratio can be calculated using the percentage of K, Mg and Ca in the diet (tetany ratio = $(K/Mg + Ca)$). If this ratio is above 2.2, winter tetany may occur.

Sudden feeding of large amounts of starch-based concentrates to cattle on forages can cause grain overload, which, if severe, can cause serious illness, founder and death. Grain overload also can permanently damage the stomach, causing poor growth and performance. If changes in types of forages or concentrate feeds are done too quickly, they can cause indigestion and cause cattle to stop eating. To prevent these problems, make feed changes over a one- to two-week period.

Parasitism

Parasites, both external and internal, rob livestock of nutrients. Internal parasites in the gastrointestinal tract can cause loss of body condition, diarrhea, weakness and bottle jaw. Internal parasites are readily transmitted to cattle on ryegrass. Winter is the most common time to see lice and

mite infestations that cause loss of body condition and possibly anemia. Control of both internal and external parasites is critical. In cattle, dewormers are still effective. In sheep and goats, dewormers rarely work anymore, so management changes and other techniques have to be employed. Poor body condition from lack of nutrition causes poor immune system function, leaving animals more susceptible to parasites. So, proper nutrition will help control parasites as well. Controlling parasites in adult females in the winter means less contamination of pastures and less infection of offspring in the late winter and spring.

Hypothermia

Sudden death caused by hypothermia can occur in Zebu-influenced cattle during cold weather, especially if rain and wind are factors. Sudden death has been reported in Zebu cattle that are healthy and have adequate body condition. Thin body condition, parasites and other diseases increase the chances of deadly hypothermia. Although the problem is more common in Zebu-influenced cattle, all cattle are susceptible and need shelter.

Dairy (Dr. Charlie Hutchison)

Milk Marketing:

Monsanto has released the results of a scientific study that compared the composition of 213 retail samples of conventional milk to milk labeled as coming from cows that do not receive bovine somatotropin. The result: No difference in concentrations of bST, insulin-like growth factor 1 (IGF-1), progesterone or nutrients. This study helps refute marketing claims that imply that milk from cows not supplemented with bST is "better" or "safer" than conventionally produced milk. "This type of marketing disparages the category as a whole and serves to confuse consumers," says Kevin Holloway, president of Monsanto Dairy Business. Monsanto is sharing results from the study with companies whose milk was tested. (Source: Dairy Alert from Dairy Herd Management Magazine)

Milk Prices and Cow Numbers:

Milk futures prices continue to rise. As of Monday, January 29th the February-through-December 2007 Class III contracts all settled above \$14.00 and all of the monthly prices were above the top one-third of historical Class III prices. In fact, the 12-month futures average price was \$14.81. A relatively good economy and outlook has resulted in a strong consumer confidence index of 110.3 for January, which is the highest level since May, 2002. This has caused a strong demand for milk and dairy products which are helping fuel the price increases in the futures market along with speculation that milk production in 2007 may grow very little compared to previous years.

According to the USDA Dairy Cow Slaughter Report the number of dairy cattle going to slaughter has decreased on a month to month comparison basis, but it continues to top year-ago levels. During December, 212,000 dairy cows were slaughtered. That is a 12,000 head increase versus a year ago, but down 7,000 head versus November. For all of 2006, slaughter was up 4.5%, or 101,000 head versus 2005.

Other Dairy Information

A group of dairy producers has filed suit against the USDA in Federal Court in Toledo, Ohio. The action stymied the government's plan to use the revised Class III and Class IV manufacturing allowances to compute the Class I price for February milk.

High feed prices and relatively low milk prices — a bad combination that has sunk the milk/feed ratio to 2.42 — has some New York state dairy producers up in arms. A meeting in mid January was designed to make politicians aware of the problem, possibly leading to some form of relief.

Figures compiled by the California Department of Food and Agriculture show that the state's dairy producers lost \$2.92 for every hundred pounds of milk they produced in 2006. High feed costs continue to be a problem.

Horses (Dr. Clint Depew)

Marketing Horses

Horses can vary in price from \$500 to millions of dollars depending on their overall quality and performance. Horsemen need to have a thorough understanding of the market and market forces in order to be successful. Since the prices vary so drastically, it is important that horsemen understand the market they are breeding for.

The key to successful marketing of horses is to start with a goal in mind. The horse industry is very specialized and buyers discriminate on pedigree, confirmation and/or performance. Therefore, it is prudent to look at a specific market to determine the quality of horses required to produce a high-end marketable horse. In evaluating the market horsemen should look at pedigrees, confirmation, and performance records. Cost and price is critical to ensure profitability. Producers will have to determine the optimum selling time and amount of money required for training or development to bring the horse to market. Breeders in all disciplines must produce a properly conformed horse. Therefore, deviation in confirmation or soundness will be reflected drastically in the price of the horse. Each market has an ideal size and type. Buyers also are looking at pedigrees. Additionally, performance records are critical in order to sell to the high end of the market. The pedigree of any saleable horse must have a top quality sire and dam to be successful. Therefore the most important asset in evaluating any market is the production of quality horses that will meet the standards of the top of the market.

Another consideration in evaluating the market is the age the horses sell at. Halter horses sell as weanlings and yearlings. Cutting, reining, and racehorses typically sell as long yearlings or early two year olds, and all around youth horses typically sell at 5 to 10 years of age.

Breeders also must promote their horses and select a sales venue. There are sales companies, sales events, and on farm sales. Advertising and promotion by the breeder can attract quality buyers. For a breeder just starting out, it is important to get your horses in the hands of good trainers and/or showmen in order to establish performance records. It is always critical to be realistic about the price and value of your horses. If your horses are successful, more and more people will be looking to purchase them and the prices can increase accordingly.

Horseman should develop a business plan. They need to know what the market demands, produce quality

horses, expect realistic prices and understand the costs associated with production and development of horses. There is money to be made with horses if quality horses can be produced.

Poultry (Dr. Theresia Lavergne)

National Situation

Total broiler production for 2006 is estimated to be 35.8 billion pounds, which is up 1.3% from 2005. Wholesale price of broilers averaged 64.3 cents per pound, down 6.5 cents per pound from 2005. Total broiler exports for 2006 are estimated to be about 1.5% higher than in 2005. Egg production increased in 2006 (6.5 million dozen), and egg prices increased 5.9 cents per dozen in 2006 (71.4 cents per dozen). Per capita consumption was 256.2 eggs and 87.5 pounds of broiler meat in 2006.

National Outlook

Due to larger numbers of chicks placed for growout and increased average broiler weight at slaughter, broiler production is expected to increase approximately 1% in 2007. Broiler prices are expected to remain the same in 2007. The broiler export market is expected to increase approximately 3-4%. Egg production is expected to increase slightly in 2007. Wholesale prices should increase in 2007.

Louisiana Situation

In 2006, 1.04 billion pounds of broilers were produced. The gross farm value of broilers was \$666.7 million in 2006. There were 468 broiler producers. There were 839 egg producers in 2006. Total eggs produced in 2006 was 23.7 million dozen. Farm value of commercial egg production was \$16.9 million in 2006.

Louisiana Outlook

Broiler production should follow the national outlook in 2007, which should increase slightly. Broiler prices and net returns should remain similar to 2006. Also, wholesale egg prices should increase compared to the 2006 prices, and production should increase slightly in 2007. The number of egg producers should be similar to 2006.

Swine (Dr. Tim Page)

Lameness in Pigs

For many years, the pork industry has attempted to deal with and decrease lameness in all classes of hogs. The pork industry estimates that over 80% of all hogs are affected by lameness. This is one of the primary reasons for culling sows from herds. Also, lameness negatively affects a large number of 4-H and FFA show pigs across the country every year.

Lameness or osteochondrosis is the failure of cartilage to fully develop into bone which leaves the cartilage area exposed and susceptible to damage. The condition is very painful because of the large amount of nerve endings that are vital to maintain balance and movement. There are two primary changes in cartilage that have been identified with osteochondrosis. They are the loss of two types of proteins within cartilage: proteoglycans and collagen type II. When these two proteins are present in lower quantities than should be, the ability of the cartilage to repair itself is severely impaired. Abnormalities form in the joints that reduce the ability of the joint surface to support the weight of the pig when the protein deficiency causes structural change of the main cartilage.

Recent research conducted at Kansas State University with growing/finishing pigs suggests that nutritional supplements may reduce the incidence of osteochondrosis. At the end of the feeding trial, the left hind legs and joints were analyzed for lesions and cartilage abnormalities due to osteochondrosis. Pigs fed diets containing fish oil or silicon tended to have a higher severity score for abnormalities when compared to pigs fed the other dietary treatments. Pigs fed high levels of methionine and threonine, copper manganese or silicon tended to have lower cartilage lesion severity scores compared with other dietary groups. Also, pigs fed high levels of methionine and threonine or the combination diets containing all ingredients tended to have lower total severity scores than those pigs fed the control diet or fish oil.

High levels of methionine and threonine tended to reduce the total severity score, while those feed ingredients plus silicon or copper and manganese may reduce the severity of lesions due to osteochondrosis. Methionine and threonine are believed to have an indirect effect on cartilage metabolism. Methionine may contribute to cartilage growth, while threonine can be converted to glycine, which relates to the production of collagen. Feed ingredients such as methionine and threonine, copper and manganese, silicon or a combination of these ingredients that are involved in cartilage and bone metabolism may reduce the incidence of osteochondrosis by positively affecting cartilage and bone metabolism or by preventing excess degradation to cartilage.

It should be noted that lameness in pigs can be initially caused by the presence of disease organisms in joints. The disease can be treated and even eliminated in many cases. However, damage done to the joints and cartilage while the disease was present may not allow for the pig to overcome the lameness. In these cases as well, dietary supplementation of high levels of certain amino acids (methionine and threonine) and minerals (silicon, copper, manganese) may be of some benefit in reducing the severity of the lameness by promoting more healthy cartilage and bone metabolism. More research is needed in this area to make definite conclusions and recommendations.

Beef (Dr. Jason Rowntree)

Ethanol and the Beef Industry

Like it or not, the President's state of the union address solidified the long term stance on ethanol and the country's drive to reduce dependence on foreign oil. In fact, Mike Johanns, USDA Secretary, was quoted January 24, 2007, by stating "With biofuels coming to the forefront, American agriculture faces the greatest opportunity of a generation to lead a future in which we get our energy by the bushel and not by the barrel". State feeder cattle prices are projected to be as high as \$1.10 down to \$0.85 and are primarily dependent on corn prices. This is down markedly from prior years. Thus, the challenge for Louisiana cow-calf producers is to "tighten the financial belt" and roll with the punches. First, producers should be more efficient. Efficiency in beef cattle terms is measured as the pounds of calf weaned/cows exposed. Several factors enter into this equation, but nutrition and pasture management are at the top of the list. In general, we should be vocal with our producers in regards to taking soil samples and fertilizing

accordingly. Secondly, erecting commodity sheds or other buildings will allow producers to manage feeds in bulk, and thus lower supplement costs. Although the plans are still underway, two ethanol plants in Louisiana should be built in the near future. The locations should be in the vicinity of Port Allen, LA and Lake Providence, LA. Although the output of these facilities is yet to be announced, one can only assume that producers can buy bulk dried distiller's grains at a very inexpensive price. This byproduct can be added at a rate up to 1/3 of the diet and is high in protein and fat. Thirdly, producers must continue to cull open females and those who are not highly productive. Females that do not yield a net return should be culled from the cowherd.

Outside of efficiencies, producers also should consider winter and summer stocker grazing of weaned calves. Although many are not equipped to graze stockers, this can be accomplished with some electric fence and a little ingenuity. Data supports that in times of high corn prices, 7-8 wt feeder cattle typically retain a higher proportion of their value relative to 4-5 wt feeders. High corn prices force feedlots to attempt to feed cattle for shorter periods of time, improving the value of heavier weight feeder cattle. Although newer cost of gain data on ryegrass or summer pasture are somewhat limited, its very realistic to estimate that cost of gains on pasture could be \$0.40-0.50 less expensive per pound on pasture versus being fed a high concentrate diet in the feedlot.

Breeding Season Strategies

For a majority of our producers, breeding season is rapidly approaching and another way of improving efficiencies is to utilize reproductive technologies and other reproductive strategies to increase the amount of females who breed. First, encourage producers to have their bulls undergo breeding soundness evaluations to ensure they are fertile and can breed a cow. An effective way of doing this is to have organized parish BSE testing days. Producers can bring their bulls to a common location. This can decrease costs and be a positive outreach as well. Secondly, promoting defined breeding seasons or the amount of time the bull spends with females is another strategy that can increase efficiency. Producers who employ 45 -60 day breeding seasons will enjoy a more uniform, heavier set of calves while also selecting for fertility within the cowherd. Next, for producers who have a defined breeding season and adequate facilities, artificial insemination (AI) of females is an under utilized technology which increases the value of calves. Primarily, producers state they do not have the time or facilities to AI their females and thus only about 10% of the nation's cowherds are artificially inseminated. In regards to time, one means of reducing hours spent checking for estrous is to use estrous synchronization and fixed time AI. This can reduce the time spent checking for estrous and is becoming more reliable and economic. Also, in this system, producers are not required to know how to AI but can employ certified, trained technicians to AI the cowherd. All in all, reproductive technologies and strategies ranging from simple to more complex can be utilized to increase cowherd efficiency and calf value.