

Animal Industry News Update

from the LCES Animal Science Specialists



Animal Health (Dr. Christine Navarre) Animal Health-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 they are not always 100% effective. Limit grazing when cattle are first turned out also can help prevent bloat. Also, under certain conditions, nitrate and prussic acid (cyanide) toxicity can occur in 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 livestock 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. Heifers are particularly susceptible. 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 also 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 magnesium deficiency. Angus cattle are most susceptible. 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 are initially 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 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.

Beef (Dr. Jason Rowntree)

Coming out of summer into the fall, most cows will be in either the gestation or pre-calving phases of production. One of the most common errors made relative to nutrition programs is over or underfeeding certain nutrients during the production cycle. The two primary supplements producers should be concerned with are supplying enough protein to meet microbial protein requirements or feeding a high energy supplement to ensure the cow is consuming enough total calories to meet her energy requirements. In order to properly ascertain when and what to supplement, forage testing is paramount. During the pre-calving production cycle, if you are in a winter calving system, protein supplements should be offered when forage crude protein drops below 7-8% and total digestible nutrients (TDN) is below 50%. In a summary of supplementing cottonseed meal to gestating cows at Rosepine Research Station, only when cows were supplemented 3 lbs of meal with low quality hay, did cows maintain body condition while gaining the weight of the fetus. The Beef NRC lists cottonseed meal as having 45.6 % protein. Therefore, the cows are receiving approximately 1.5 lbs of protein in the supplement daily. Other supplements that could be considered are soybean meal, dried distiller's grains (this product has less protein and thus 5-6 lbs must be supplemented daily to reach 1.5 pounds of net protein) and lick tanks, high protein cubes or tubs that can supply modest levels of protein daily. Table 1 documents the current economics of protein supplementation during the precalving or gestation phases of production. These are estimates.

Table 1. Pre Calving Supplement Costs

Product	Cost of Product \$	Amt Fed /Day	Lbs protein fed/day	Cost of protein/lb	Cost/Day
Distiller's grains	200/ton	5 lbs	1.4	\$0.35	\$0.50
Corn	190/ton	5 lbs	1.15	\$0.41	\$0.47
Gluten Feed 35%	2.30/gallon	2 lbs	0.70	\$0.15	\$0.41
Liquid Feed 20%	396/ton	3 lbs	0.60	\$0.99	\$0.59
Cube 28% Tub, 225 lb	800/ton	1 lb	0.28	\$1.43	\$0.40

Not only is it important to understand forage quality, but it is essential to understand the cow's body condition. Recently, Cooke and Arthington from the University of Florida published data with respect to winter supplementation and body condition score with 1 being emaciated and 9 being obese.

Table 2. Effect of Body Condition Score on Pregnancy Rate

Item	Winter Range BCS (Late Gestation and Calving)				Breeding Season BCS		
	<4	4	5	>5	<4	4	5
Pregnancy Rate, %	55.2	75.0	73.3	76.2	57.7	74.5	83.3

Based on Table 2, cows below a BCS of 4 at calving only bred back 55.2% of the time. While cows below a 4 during breeding bred back 57.7% of the time, likewise cows that were a BCS of 5 bred back at a rate of 83.3%. This illustrates the necessity of ensuring cows entering calving should be at a BCS of 5. These data illustrate the need to supplement cows to ensure they are a BCS of 5 at calving.

Poultry (Dr. Theresia Lavergne) **In-House Pasteurization/Composting of Litter is Beneficial for Broiler Production**

In-house composting of litter between flocks of broilers has become a popular management practice in the broiler industry. Pasteurizing (composting) broiler litter between flocks is a good management procedure to reduce microbial load in broiler houses, to extend the life of the litter, and to allow cleanout to extend to times when it is favorable for the grower or market.

Through in-house pasteurization, bird performance is improved and the chance of spreading disease is decreased. Bacterial and viral loads in litter can be reduced by in-house composting of the litter. After birds are removed from the house, a blade or compost turner can be used to form two windrows that run the length of the house. This allows the litter to go through a heat. Temperatures of 131° F or greater are needed to reduce the bacterial and viral load in the litter, and windrowed litter reaches this temperature within two to three days. The windrowed litter will remain at this high temperature for a day or so. This is long enough to kill many of the bacteria and viruses present in the litter. With that said, keep in mind that the longer the litter is windrowed the greater the opportunity for the heat to kill the organisms present. Thus, litter should be kept in windrows for at least a week.

In times when disease challenges may be present, in-house composting can reduce the risk of spreading disease to the next flock and reduce the risk of spreading disease when litter is removed from the house. Researchers at Auburn University have reported that microorganisms such as infectious

laryngotracheitis (LT) and campylobacter are reduced by in-house composting. Therefore, when the loads of harmful bacteria and viruses are reduced, birds can grow and perform better since they will not have to fight disease challenges (some of these may be mild or unseen). This is an important management technique to consider during times of disease outbreaks.

In parts of the U.S. where litter cleanout is limited due to the season of the year or there is limited availability of new bedding material, in-house composting can be used to extend the life of the litter. This management practice allows broiler growers to reuse their litter until there is a beneficial time for them to cleanout the house. With in-house composting, broiler growers can reuse the litter until the timing is right to use it for fertilizer or until they have a market for it. Also, in-house composting can be a cost savings measure in times when new bedding material is expensive and/or limited in availability.

As litter is reused and built-up the concentration of minerals generally increases, with the exception of nitrogen which may decrease. Thus, it is important to have reused litter analyzed for nutrient content before it is used as fertilizer. This will ensure proper application of reused/built-up broiler litter for fertilization.

In conclusion, in-house windrow composting can be an excellent litter management practice to reduce disease, to improve performance in subsequent flocks, to extend the life of the litter, and to reduce the risk of spreading disease when litter is removed from poultry houses.

Horses (Dr. Clint Depew) **Preparing for the 2009 Breeding Season**

Now is the time to start preparing for the 2009 breeding season. For mares that are pregnant or are supposed to be pregnant, pregnancy checking is recommended to insure pregnancy and proper foal development. Mares that have slipped their foal should be checked for signs of infection or uterine damage to determine what caused the loss and to determine whether the mare should be rebred. Mares that slip foals and/or have damage to the uterus typically have trouble carrying foals to term and it may be necessary to use embryo transfer to produce a foal. Breeders should determine if the mare is of sufficient quality to justify the cost and expense of embryo transfer. Secondly, if an infection has occurred it is important to clear that up prior to the breeding season for successful rebreeding.

Mares that are safely in foal need to be kept in good condition. Typically, a condition score of 5 or 6 is appropriate. When the mare foals, she will usually lose body condition as a result of milk production. The foal will obtain about 2/3 of its size in

the last 3rd of gestation; therefore the mare will need to go from a maintenance ration to 3-5 pounds of feed per day in order to maintain adequate condition for foaling and subsequent lactation. Individual mares will require different amounts of feed. So, it is important to observe the mare's body condition and feed accordingly.

Thirty days prior to foaling, mares should be vaccinated for all the common respiratory and infectious diseases in the area. This will ensure adequate immunity for the foal when it sucks the first milk of the mare. For maiden mares, lights may be considered to encourage early cycling. When horses are put under lights, they need 16 hours of daylight and 8 hours of darkness which simulates the spring and summer daylight hours. This will cause the mare to cycle more normally, start shedding hair, and re-breed earlier. When mares shed hair earlier, they will need blankets to keep them warm and they will need to stay under lights until sometime in the late spring so that they do not fool their body into thinking that winter is coming in the middle summer.

Just prior to foaling, mares should be stalled or put in a small pasture for observation. Mares typically foal at night, but they can foal any time of day. The total foaling process occurs in about 30 minutes. If the mare goes past 30 minutes there is a good chance that problems have developed and she needs assistance. When a mare foals, you should first see the two front feet and then the head. If you see a hind leg or a head without the front feet then an emergency has arisen and immediate attention is needed.

The foal should stand and nurse within 30 minutes to an hour after birth. Maiden mares may need some help in accepting their foal. Sometimes, putting the mare's manure or milk on the foal will help with acceptance. The placenta should shed in 3-5 hours. Check to make sure that the total placenta has shed in order to avoid uterine infections and re-breeding problems.

The foal's navel should be disinfected with iodine to prevent the entrance of infections. An enema is typically necessary to assist the foal in passing the first manure which is hard and compacted.

It is important that foals get colostrum because it contains all the antibodies and immunity that they need to fight infections. The foal's stomach and intestines will absorb the colostrum for the first two or three days of life. If a mare drips milk several days before foaling, it is critical to get some of that first milk or obtain colostrum from another mare to provide immunity for the foal. Research has shown that foals do not develop immunity on their own for the first 4-6 months due to the naivety of their systems. So, colostrum is very important. Additionally, early vaccination has little effect on the

foal because of their inability to develop immunity. Foal vaccination should start somewhere around 4-6 months of age. Deworming needs to start about the 2nd or 3rd month and continue every two months for the first year of life. Additionally, feed needs to be available for the foal as early as possible. Most foals will eat with their mother and their systems can adapt to feed in 3 or 4 weeks. During the first year, a foal should typically eat a pound of grain for every month of age. So, if he is 5 months old he should be eating about 5 pounds of grain per day. The mare's milk production will affect that consumption and it may be important to separate the mare and foal to encourage more feed consumption.

As soon as the mare foals, her feed intake will double. So, a mare that is eating about 5 pounds of grain per day probably needs about 10 pounds or more per day to produce the amount of milk required by the foal. A mare will typically produce 30 to 40 pounds of milk per day and her water consumption will increase accordingly. A mare that typically drinks 10 gallons of water per day will drink 15-20 gallons of water per day when producing milk. If your mare is getting fat during lactation, she is probably not producing adequate milk. Reduce her feed intake and start feeding the foal since it may not be getting adequate amounts of milk.

About 9 days after foaling, a mare will have a foal heat. Approximately 21 to 30 days later the mare will have her second heat period. The decision to breed on foal heat should be based on two things. First, the mare should not have had any difficulty in foaling. Secondly, her uterus should be returning to normal condition rapidly. If the mare foals late in the year it may be desirable to re-breed quickly. If the mare's uterus is not in good condition and more time is needed, a veterinarian can use prostaglandin to short cycle the mare and bring her back in heat about 10 to 12 days later.

Re-breeding may present the necessity for hauling the mare and the foal. Hauling exposes them to a certain amount of risk for injury and disease. Places that horses accumulate such as breeding farms, horse shows, or play days results in exposure to infection and diseases, primarily respiratory problems. Additionally, the horse is stressed by being hauled and is typically more susceptible to infections. The best scenario for the mare and foal is to stay at home and/or isolated from other horses. With the availability of cool shipped semen and artificial insemination, most horsemen can re-breed their mares without the risk associated with travel stress and exposure to other diseases.

By planning ahead and preparing for the foaling and re-breeding process, breeders can be more successful and have a happier outcome.

Dairy (Dr. Charlie Hutchison)

Milk Prices, Production and Cow Numbers

The prices for the different classes of milk produced in October are: Class I \$19.33/cwt, Class II \$16.60/cwt, Class III \$17.60/cwt and Class IV \$13.62/cwt. Based on these prices and an estimation of the utilization in each class, the uniform blend price should be \$18.95/cwt \pm \$0.40/cwt. This should result in a net pay price for producers in South Louisiana for milk produced in October of \$17.45/cwt to \$18.50/cwt depending on deductions, butterfat level and incentives. This marks the first time since March of this year that the uniform blend price will probably be below \$19.00/cwt. The uniform blend price for October will be about \$1.70/cwt lower than the September blend price.

The Class I price for November milk was announced at \$21.13 for Federal Order # 7 at the Atlanta zone; which is \$1.80 higher than the October Class I price and \$3.42 lower than a year ago.

In October the USDA left the milk production estimate the same for 2008 as the previous report, but slightly increased the production estimate for 2009. This production level combined with weaker demand due primarily to the state of the economy resulted in USDA lowering milk price expectations. The 2008 all-milk price is forecast at \$18.40-\$18.50/cwt, declining to \$16.50-\$17.40/cwt in 2009. The 2008 Class III milk price is now forecast at \$17.50-\$17.60/cwt which will drop to \$15.85-\$16.75/cwt for the upcoming year. The 2008 Class IV price is now forecast at \$15.10-\$15.30/cwt., dropping to \$12.95-\$13.95/cwt in 2009. Also, from January 1 until September 20th USDA reported that 40,468 dairy replacement heifers have been imported from Canada.

The milk-feed price ratio for September according to USDA is 1.82 which is a mere 0.01 points higher than the revised August ratio. However, the ratio is still 1.37 points less than a year ago.

The USDA used an all-milk price of \$18 to calculate the September ratio. That price is 40 cents less than the price used to calculate the August ratio. It also is \$3.80 less than a year ago.

Feed prices also were lower in September. The corn price of \$5.17 is 9 cents less than August. However, it is \$1.89 higher than a year ago. The price of soybeans fell to \$11.70 per bushel which is down \$1.10 from August. However, that is \$3.55 higher than a year ago. Baled alfalfa hay declined \$4 to \$176 per ton. One year ago it was \$135 per ton.

A ratio of 1.82 means that a dairy producer can buy 1.82 pounds of feed for every pound of milk sold. Whenever the ratio meets or exceeds 3.0, it is considered profitable to buy feed and produce milk.

Dairy-cow slaughter is up. In August, 226,000 dairy cows were culled, according to the USDA "Livestock Slaughter" report. That is 17,000

head more than July and 14,000 head more than a year ago. Year-to-date slaughter through August is up about 3.9%.

CWT Announces Another Herd Retirement Program

Cooperatives Working Together will conduct a new herd retirement program this fall. This will be the second herd retirement round conducted this year; the previous one was initiated in June.

As farm-level milk prices drop to their lowest level in 18 months, CWT officials said it was time the program offered its members another opportunity to retire their herds to trim overall national milk production, and strengthen prices going into 2009.

This will be the sixth herd retirement round since CWT began operations in the summer of 2003. As it did earlier this year, this round offers bidding producers the option of including all their bred heifers, for a flat fee of \$1,225 per animal. Producers must offer all of their bred heifers at that price. The deadline for application is November 24th. Detailed information can be found at www.cwt.coop, including a bid application.