

Large Animal Newsletter

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Rabies Vaccination for Your Horse

Rabies cases seem to be on the rise for western Nebraska and Kansas and eastern Colorado. Reported cases for Rabies in 2008 includes: 1 case of skunk rabies in Yuma County, 2 cases of skunk rabies in Cheyenne County, and 1 case of skunk rabies in Red Willow County. There has been a case report of horse rabies in Buffalo County, Nebraska and in Stevens County, Kansas for 2008. Also case reports for rabies in cows have been reported in Nebraska for 2008.

Rabies is a virus that causes a fatal neurological disease in animals and people. The signs of Rabies include: abnormal behavior such as nocturnal animals about in the day, animals approaching people in cases where this is considered abnormal, abnormal gait (difficult walking), and excessive vocalization (cows bellowing). Most people associate Rabies with an aggressive attitude while this is true other animals may become quite passive or stuporous this form is known as the dumb form. Rabies is transmitted mainly through saliva introduced via bite or handling animals without proper protective equipment. The best way to protect yourself and your animals is through proper vaccination and avoidance of any animals exhibiting the signs of Rabies. Contact your local public health or animal control authorities in cases were Rabies is suspected.

The American Associated of Equine Practitioners (AAEP) has recently designated the Rabies vaccine as a core vaccine of horses. The core designation basically means that the AAEP is now recommending Rabies vaccination for all horses. The current Equine Rabies vaccines are labeled for once a year administration and require only one vaccination to start protection. Other vaccines with the core designation include sleeping sickness (Eastern and Western), Tetanus, and West Nile. Other vaccines may be deemed necessary as well but are used in conjunction with a risk assessment by your veterinarian. It is best to develop a full health program for your horse with your veterinarian.

Twin Forks Staff

With Cow Size, One Can't Forget Production Potential

Percentage of Cow Weight Weaned

What size cow is right? The Dickinson Research Extension Center recently established two sets of cattle based on body weight. Since the year was dry, the cow size question came up quickly.

What size cow is right? How does one measure inputs versus production?

These two herds (groups) of cattle were weighed in the late fall or early winter. The difference in weight was 355 pounds.

The first herd of 52 cows averaged 1,216 pounds (856 to 1,395 pounds). The second herd of 50 cows averaged 1,571 pounds (1,350 to 1,935 pounds).

Earlier discussion detailed the difference in dry-matter intake for these two groups of cows. Projections were shown if the groups were placed in confinement on June 1 when the calves were approximately 3 months old and fed during the summer until the end of September.

The 1,216-pound group of cattle, with milk production estimated at 20 pounds peak, would have an average daily need of just less than 28 pounds of dry matter of a ration that was 60 percent total digestible nutrients and 9.8 percent crude protein. The 1,571-pound group of cattle, with milk production estimated at 20 pounds peak, would have an average daily need of just less than 34.5 pounds of a daily dry matter of the same ration.

By placing the two groups of cows on pasture, with normal forage production in southwestern North Dakota, the land mass required for a group of 50 cows weighing 1,216 pounds would be 529 acres. A group

of 50 cows weighing 1,571 pounds would require 642 acres.

The heavier cows would require approximately 23 more tons of feed in a dry lot for 4.5 months. On pasture, the heavier cows would need approximately 113 more acres.

Does the output of the larger cows justify the extra nutrition? That is not an easy question because cow age and other factors need to be considered when calf production is estimated.

However, some idea of potential production from these two groups of cows can be estimated. For instance, since cows tend to reach peak calf production around 5 years of age, the actual previous calf production of the cows in each group could be utilized to estimate this year's production.

Performance records of body weight at weaning of cows aged 5 to 9 years and their respective calf's weaning weight were pulled and evaluated.

The older cows in the first group (current winter weight 1,216 pounds) averaged 1,272 pounds in the fall and weaned 602-pound calves, or 47 percent of their body weight. The heavier group of cows (current winter weight 1,571 pounds) averaged 1,463 pounds in the fall and weaned 603-pound calves, or 42 percent of their body weight.

This data trend was further examined by finding the percentage of cow weight weaned in all mature cows in the center's herd data system. The data evaluated actual weaning weight of calves and mature cows with calves of both genders.

All the cow records were allotted to 100-pound increments and weaning percentages were calculated. The 12-weight or lighter cows weaned 50 percent of their fall weight (1,242 pounds) with 617-pound calves.

Thirteen-weight cows weaned 45 percent of their fall weight (1,357 pounds) with 611-pound calves.

Fourteen-weight cows weaned 41 percent of their fall weight (1,456 pounds) with 589-pound calves.

Fifteen-weight cows weaned 39 percent of their fall weight (1,549 pounds) with 598-pound calves. Those sixteen-weight and above cows weaned 34 percent of their fall weight (1,698 pounds) with 572-pound calves.

By Kris Ringwall, Beef Specialist NDSU Extension Service

Animal transport costs dollars, pounds

Cattle transportation is more complex than loading them up and moving them out. Feedlot cattle spend more than 65 million hours in transport annually in Canada.

During those trailer-bound hours, the average animal shrinks 1.7 percent, or 8.5 kilograms, during journeys of four hours or fewer. That shrink increases to 4.6 percent, or 23 kilograms when the trip lasts longer. Al Schaefer of Agriculture Canada in LaCombe Alta., says that this loss is real money, not gastrointestinal fluid or urine. "These are water losses, but they come from the muscle mass. That is expensive water that you can't just put back very easily," he said in a speech to colleagues at a recent Canadian Society of Animal Science conference in Saskatoon.

On average, a 500-kilogram animal will lose between \$12 and \$41 in value during transport to harvest. Should the trip be too stressful for the animal, and it ends up as a dark cutter, the carcass is discounted \$200-\$300 at the packing plant.

Transportation is blamed for half of the downgraded animals due to dark, firm and dry meat quality. "We have a lot of work to do on our trucks and our knowledge of how transportation affects livestock," Schaefer said. "Time in the truck, the drivers' abilities, the weather, the exhaust, the

trailer, the road surface, the condition prior to loading-it's complex, it's costing the industry a heck of a lot of money, and it's one of those areas that people just don't think enough about," he said.

Malcolm Mitchell of Scotland's Roslin Institute would agree. His work has been the basis for European Union regulations for animal hauling, and he said, "Many things can be blamed for animal losses in transport. Even more losses in meat quality are blamed on something else entirely. In fact, these were problems associated with animal stress during transport."

Peter Kettlewell, a colleague of Mitchell's, is an agricultural engineer at Silsoe Institute north of London, England. He uses a specially designed truck and trailer with built-in monitoring equipment to study livestock in transit. "We can monitor deep body temperatures, stress levels, ambient temperatures, wind speeds internally and carbon dioxide levels. If it is happening to animals, we know about it," Kettlewell said while presenting his research at the Saskatoon event.

"Trailer design has significant effects on livestock. Wind doesn't go where you think it will. Temperatures on a cold day can range by 40 degrees C in the same load of animals. You can kill them with heat in one part of the load and freeze them to death in another...and moisture is more important than almost any other single factor. So wind and ventilation are critical. This is a super-confined barn on wheels."

Kettlewell found that air enters from the rear of the trailer and exits from the sides at the front. A vacuum forms at the front of the trailer by the forward motion of the vehicle and is stronger than any wind force trying to come into the front vents. The hottest part of the load is always the top, forward section, back slightly from the very front as air is drawn through the load of animals and exits there. "You

can fit the truck with all sorts of dams and air devices. It won't change this basic fact," he said.

In a recent Schaefer study a standard load of 455-kilogram calves was hauled between Kamloops, B.C. and Lacombe, Alta. Depending on where the animals were located in the trailer, the loss between 7.3 and 10.1 percent of body weight. The highest losses were on the top deck in the area just behind the "dog house," the zone over the tractor fifth-wheel hitch and the drive wheels. "That is \$20-\$30 variation in losses due to location in the trailer," Schaefer said.

Work by Kettlewell and Mitchell has resulted in the addition of fans to livestock trailers across the EU. "Fans only run when the vehicle is parked. But we are finding that managing air flow during transit is just as important," he said.

Lowering stress during transport may be one way to improve meat quality and reduce fluid losses. Adding amino acids to feed rations is an inexpensive method that would cost a few cents per day in the run up to shipping. Schaefer said this feed addition showed a 7.8 percent improvement in grade at the packer. *Western Producer*

Trade Show 2008

Mark your calendars now for Saturday, August 16th. Twin Forks Clinic will once again be having it's trade show. Producers will have the opportunity to talk to various drug reps and book the products that you will need for the weaning, preg checking and calving seasons in the months to come.

It will be held Saturday, August 16th, 2008 at the Benkelman Community Building at 908 Huron Street from 10:00 A.M. till 2:00 P.M. MT. Lunch will be served. Sponsors will be available to discuss products specifically. This trade show will be informative and offer you the ability to

order some of your products for the fall at a cost savings.

Your sponsors will be:

Twin Forks Clinic
Pfizer
Intervet
Schering-Plough
Novartis
Fort Dodge
Boehringer Ingelheim
Newport Labs
AgriLabs
Bayer Animal Health

Hope to see you there!!

Reduce stressors to make weaning easier on calves and cowboys

Weaning is just around the corner and now is the time to identify management practices that may potentially reduce the stress associated with weaning for both calves and cattle producers. One of the most stressful events in the life of a calf is weaning. Stress in general can significantly impact cattle health and well-being, reduce animal performance and increase disease susceptibility. Therefore implementing management practices that reduce stress may improve calf health and weight gain during the weaning process.

The first step in managing stress, regardless of the situation, is to recognize the stressors or sources of stress. The primary stressors experienced by calves during weaning are: 1) maternal separation 2) moving to a new environment and 3) becoming accustomed to unfamiliar feedstuffs. Once the sources of stress have been identified, management practices that reduce the effects of these stressors may be implemented.

The following management practices minimize weaning stress.

Don't add additional stressors.

Castration, dehorning, and branding are all stressors that can add to the stress of weaning. These tasks should be completed a minimum of 3 weeks prior to weaning.

Provide access to the weaning pen or pasture. Providing cows and calves access to the weaning area for a few days/weeks prior to weaning allows calves to become accustomed to the weaning area. This reduces the additional stress of an environment change on calves following weaning.

Feed cows and calves in the weaning pen or pasture. If newly-weaned calves are going to be fed after weaning, feed both cows and calves small amounts of the diet that will be fed to calves after weaning. This allows calves to become familiar with new feedstuffs as well as the bunks, tubs or feeders in the weaning area.

Move the cows not the calves.

Once both cows and calves have become accustomed to the weaning pen or pasture, remove the cows from the area, leaving the calves in a familiar area.

Allow fenceline contact if practical.

Research indicates that allowing fenceline contact between cows and calves for 7 days after separation reduces behavioral stress and minimizes post-weaning weight loss.

Fences should be sturdy and tight enough that calves cannot nurse. If fenceline contact is not practical, then cows should be moved to a location where they cannot hear calves.

Clean the pen. If calves are going to be weaned in a drylot, remove the previous years manure and start with a clean pen. Cleaning the pen prior to weaning minimizes dust and allows pens to drain better should conditions become wet.

Minimize fence-walking. Fence-walking can be minimized by placing feed bunks or water tanks along the perimeter of the weaning area. Additionally, this strategy allows calves to come in contact with feedstuffs and water sources.

Establish a herd health program.

Producers should consult their veterinarian and develop a herd health program that includes a vaccination program and a treatment plan for calves that become sick. A sound vaccination program prepares

calves for disease exposure. While a treatment plan allows producers to have the supplies and pharmaceuticals on hand to treat illness in newly-weaned calves immediately.

The key to reduce weaning stress is to first recognize the sources of stress and then implement management practices to minimize the physical and behavioral effects of the stressors.

For more information about fence line weaning management see E. O. Price, J. E. Harris, R. E. Borgwardt, M. L. Sween and J. M. Connor. 2003. Fenceline contact of beef calves with their dams at weaning reduces the negative effects of separation on behavior and growth rate. *J. Anim. Sci.* 81:116-121.

(<http://jas.fass.org/cgi/content/full/81/1/116>).

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