

Large Animal Newsletter

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Calving Season 2010

As this article is written we have had 74 calving calls at both the Wray and Benkelman clinics. Looking back at previous years data, we should be about 87% done.

For the past ten years, the staff at Twin Forks Clinic has been keeping data on the calving calls that we receive. The data that we collect includes dystocia score, calf vigor, calf sex, cow age, colostrum score, and other treatments.

Dystocia Score

Calving calls were ranked by dystocia (calving difficulty) scores. These dystocia scores are as follows.

1. Unassisted
2. Easy Pull
3. Hard Pull
4. C-Section
5. Mal-presentation

About 38% of the calving calls that we received were a dystocia score 5 or a mal-presentation. Mal-presentations include those calves that were coming backwards, breech, had legs back, or head was back. In about 35% of the mal-position cases, the doctor was able to reposition the calf and it was then delivered with an "easy pull".

About 23% of all calving calls were considered hard pulls. About 47% of the cows in this category were 1st calf heifers with calves that were a little too big for them. The others in this category were middle-aged cows in which the calves were a little too big, or the cow didn't dilate for some reason.

This year about 24% of the calving calls resulted in a C-section so far this year. In recent years, we have seen up to 25% of our calving calls resulting in C-Sections. About 63% of these calls were out of 1st calf heifers. 50% of the c-sections were a result of calves with birth weights of 100 pounds or greater. One of these calving calls was the result of a deformed calf.

Calf Vigor

Calf Vigor score was used to describe calf health and aggressiveness after birth. A calf vigor score of 1 is a good indication that assistance was given in a timely manner. Calf vigor scores and occurrences are as follows.

- | | |
|---------------------|-----|
| 1. Looking Good | 42% |
| 2. Big Head/Vigor + | 14% |
| 3. Slow | 5% |
| 4. Needs Treatment | 6% |
| 5. Dead | 33% |

The ten-year average for calves that were born dead at the clinic is 31%. This year 60% of the calves that were born dead were a result of mal-positions that did not receive assistance soon enough.

Calf Sex

About 67% of the calves that were assisted at Twin Forks Clinic, were bull calves. The average for the last 10 years is 70%. The bull calves were about 11 pounds heavier at birth on average.

Birth Weight

Birth weight was measured with a CalfScale™ foot tape. Research has shown that these tapes have about a .85 correlation with weights that were taken with an accurate hanging scale. The hoof tape measures the circumference of the foot in centimeters and correlates that measurement to an estimated birth weight. We have found these tapes to be fairly accurate except in the case of longer bodied calves.

Birth weights averaged 89 pounds and ranged from 55 to 130 pounds. As mentioned earlier, the bull calves were about 11 pounds heavier than the heifers.

Calves with a birth weight of 90 pounds or greater were almost 3 times more likely to be the result of a hard pull or c-section. However, there were small differences in calf vigor.

Cow Age

About 47% of the calving calls have been from 1st calf heifers. About 12% came from 2nd calf heifers, 27% came from middle aged cows and 11% came from cows eight years of age or older.

Colostrum Score

For the past several years, the staff at Twin Forks Clinic has measured the colostrum score of all the calving calls that come in. Colostrum score is measured with a device called a colostrometer. A colostrometer measures the specific gravity of the colostrum and gives us an idea of the amount of immunoglobulins (IgGs) and other solids in the colostrum.

Basically, the higher the colostrum score, the better the colostrum quality.

Colostrum scores give us an idea of the amount of IgGs in a quart of colostrum. For instance, a colostrum score of 100 means that there are roughly 100 grams of IgG per quart of colostrum. Our goal is to provide the calf with 200 grams of IgG within the first 24 hours of life. If a cow has a colostrum score of 100, the calf would require 2 quarts of colostrum within the first 24 hours. Measuring the colostrum score also gives us a good idea whether or not the calf needs to be supplemented with a colostrum replacer like Colostrx 130 or Colostrx Plus.

Colostrum scores ranged from 15 to 120 with an average of 80. On average the calf would have to consume 2 ½ quarts of colostrum to receive adequate passive transfer. On the average, all colostrum scores were very similar with the 2nd calf heifers having the lowest scores.

<u>Class</u>	<u>Average Colostrum Score</u>
1 st Calf Heifers	88
2 nd Calf Heifers	70
Mature Cows	82

There are several factors that affect passive transfer. These include cow age, cow nutrition, cow health, and vaccination history, and udder conformation.

When we assist live calves, we milk the cow and tube feed the calf it's 1st feeding. Our goal is to get about 100 grams of IgG into the calf before they leave the clinic. Our ability to do this is sometimes limited to the quantity and/or quality of the colostrum available. When the quantity or quality was low, we supplemented the calf with a colostrum replacer like Colostrx 130 or Colostrx Plus. This year on the average, calves received 115 total grams of natural IgGs before they were sent home. That is

more than half of what they need in the first 24 hours.

Overall, the number of calving calls that we have received has been about "average" compared to the previous 5 years. Most of them were due to mal-positioned calves.

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic

Equine Health Awareness

Spring is fast approaching and so are those summer-time threats to your horse. Mosquitoes can transmit the deadly diseases of Sleeping Sickness and West Nile. The spring and summer climates are ideal for intestinal parasites and tetanus is an ever-present danger. Horses that travel to events or are exposed to horses that travel to events, breeding farms, or sale barns are at high risk for respiratory diseases such as Influenza, Rhinopneumonitis, and Strangles. Rabies vaccination may also be a concern for horses in endemic areas.

Spring (April-May) is the ideal time to begin or continue preventative measures to protect your horse. Vaccines and deworming are essential for their well-being. We at Twin Forks Clinic take these preventative measures very seriously and have developed basic "packages" to meet these needs. Our equine packages provide your horse with needed vaccines and dewormings for the year. We also have packages designed to provide services such as dental care and coggins testing, along with the needed vaccinations and deworming. The deworming program will consist of four different products that will be given throughout the year. Reminders will be given to you to help maintain the ideal schedule to avoid parasite resistance, decrease worm egg burdens on pastures, and maintain health and performance of your horse. Ask us about these packages today by calling Twin Forks Clinic in Wray at 970-332-3116 or Benkelman at 308-423-2895.

Cattle Update: AI Calving Distribution

Most cattle producers know that the textbook gestation length of beef cattle is 283 days. Most also realize that biology is variable, and predicting the exact day of natural birth in most mammalian species is very difficult to do. However, some producers seem to forget these biological laws when using new technology in their breeding programs. Many producers associate artificial insemination (AI) with the cowherd behaving in very regimented and predictable ways.

We often recommend that Noble Foundation consultation clients implement a timed AI program, in which a large group of heifers is synchronized and inseminated on a single day. Some producers hesitate to implement such a system because they envision the resulting calf crop being born on a single day and creating a problem if the heifers require calving assistance. Fortunately, biological variability takes care of this potential problem.

Figure 1 illustrates the calving distribution from a cooperator's herd in which all heifers received AI on April 3. The red bars represent the number of AI-sired calves that were born on each day. Even though the AI-sired calves were all conceived on the same day, they were born across a span of 28 days, from Dec. 29 to Jan. 26. This equates to an observed gestation length from 270 to 298 days, with a weighted average

gestation length of 279 days. The majority (85 percent) of the AI-sired calves were born within 10 days of one another, from Jan. 3 to Jan. 13. The most active calving day was Jan. 7 (day 279) on which 14 percent of the AI-sired calves were born.

If this producer had assumed the gestation length of each heifer would be 283 days, he would have expected these heifers to calve on Jan. 11. However, 73 percent of the calves were born prior to that date. The AI bull these heifers were bred to was selected because of his proven calving ease, which could be a result of short gestation length. This data illustrates the need for producers to plan for variability in gestation length when implementing an AI program. Producers should have all of their pre-calving preparations completed and be ready for calves 14 days prior to the "expected" calving date.

Artificial insemination in a commercial beef production system has advantages and disadvantages. Implementation of AI helps a producer better manage the calving season. AI bulls typically have superior, more predictable genetic value compared to herd bulls and sire better-performing calves. Individual bulls can be selected for specific matings to improve desired traits in part of the cowherd, or a single bull can be chosen to sire the entire calf crop. This would tend to increase uniformity, thereby increasing overall value of the calf crop. Artificial insemination can also be beneficial to smaller-scale producers where the

upkeep and management costs of a herd bull are not economically feasible. Some disadvantages of AI may include the cost of semen or labor. A considerable amount of handling of the cattle is necessary and adequate working facilities are required for artificially inseminating cattle. Finally, if the cows aren't synchronized, the producer must spend considerable time each day detecting cows that are coming into heat and are ready to be bred.

AI might not be the right choice for every producer, but more producers should consider the benefits of an AI program for their replacement heifers. A timed AI program has much lower labor requirements than traditional AI, and it doesn't result in all the calves being born on the same day.

Source: Ryan Reuter and Jessica Robinette, Noble Foundation 03/12/2010

Prepare now for Breeding Season!!

It seems like this year's calves have just barely hit the ground and it's already time to get ready for breeding season. The staff at Twin Forks Clinic can help.

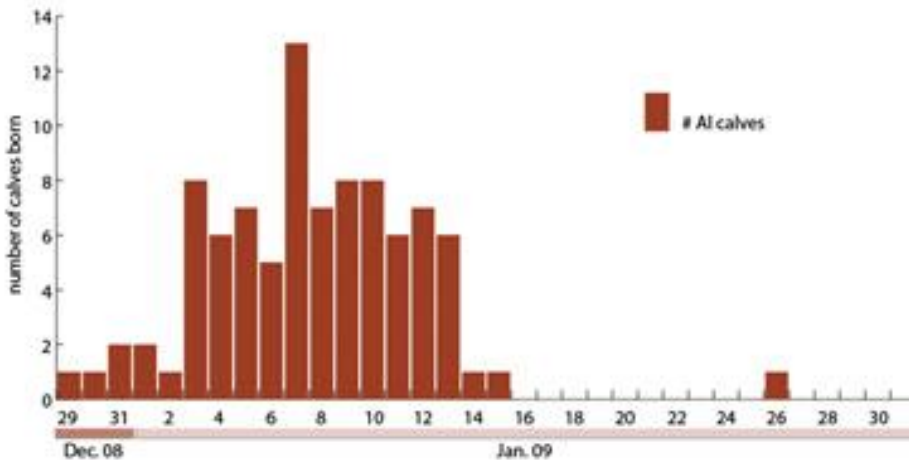
Breeding Soundness Exams

So far, the crew at Twin Forks Clinic has performed breeding soundness exams on 215 hd. About 60% of these bulls were herd bulls, with the remainder being yearlings and 2 year olds that were for sale.

Of the herd bulls that we have fertility checked, about 20% of them have failed compared to 16% a year ago. The majority of these bulls failed due to poor morphology. Many of these bulls had other problems like scrotal scabs, frostbitten scrotums, previous injuries, and lameness.

Problems that were encountered a year ago, with bulls that failed or were deferred are listed below.

Figure 1. Calving distribution of calves born to heifers all bred on a single day in a timed AI program.



Occurrences of Reproductive Problems amongst Bulls that Failed during BSE at Twin Forks Clinic

<u>Problem</u>	<u>Occurrence</u>
Morphology (<70% Normal cells)	94%
Poor Motility	25%
Scrotal < 32 cm.	20%
Lameness	6%
Vesiculitis	2%
Abnormal Testes	10%
Penis (Warts, Persistent Frenulum Deviations)	5%
Any combination of above	30%

Many of the bulls that were deferred had small problems like penile warts, persistent frenulum, or prepuce problems that could be addressed with some veterinary attention. These bulls were deferred pending a recheck to make sure that they healed correctly after their problems were addressed. Many of these problems would have gone unnoticed if a BSE were not performed.

For those of you who have a BSE performed on your bulls, you're not out of the woods yet. It is very important to watch your bulls closely after turnout. We need to make sure that the bull is both able and willing to breed cows. Inability to complete normal service or lack of libido can greatly reduce calf crop percentage. The best way to detect these problems is by watching the bulls if at all possible during the first part of the breeding season.

Vaccination and Deworming

Now is the time to vaccinate and deworm all breeding females in the herd. Many producers have been vaccinating with a 5 way viral combination with Vibrio/Lepto. In most cases, the initial dose must be given to the cows when they are open prior to breeding. All females should be vaccinated 30-45 days prior to breeding.

Spring deworming can be accomplished about 6-8 weeks post turnout with the addition of Fenbendazol to mineral supplements. Ask us how to implement a spring deworming program. Watch for details on a special testing opportunity this spring.

Don't forget the bulls! Vaccinating and deworming the bulls is important too. All producers who have their breeding soundness exams done at Twin Forks, have the opportunity to participate in our "Bull Program". We vaccinate, deworm, delice and test all new bulls for PI BVD for a reduced rate.

A.I. and Synchronization

For those of you who utilize synchronization and/or A.I. in your breeding program, Twin Forks Clinic can provide the tools to make your program a success.

We have computer software that maps out on a calendar exactly when you need to administer your reproduction drugs, and heat detection and breeding events for maximum results. This helps eliminate errors that can occur during the synchronization program. All we need to know is when you want to start breeding, and which synchronization protocol you want to use and we can supply you with a detailed calendar to make sure that synchronization goes smoothly!

We also have MGA, CIDRs, prostaglandins, and GnRH available for your synchronization needs. We can also special order special products if you prefer.

We started carrying MGA last year. The mix that we carry needs to be fed at rate of 1 pound per day, in order to supply the cattle with 0.5 mg of melengestrol acetate/head/day. This allows for more uniform intake compared to other MGA supplements that are fed at .5 lb./hd./day

Our staff has over a decade's worth of experience in providing arm service, semen handling, and synchronization planning. If there is anything we can do to help you make your breeding season a success, Let us know!!

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic

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