Twin Forks Clinic 4th Quarter Issue 12/31/2007

# Large Animal Newsletter

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TWIN FORKS CLINIC
VETERINARY SERVICES

## Preg Check 2007

Another year has gone by and preg check season has virtually come to an end. We have been keeping records on the pregnancy exams that we have performed over the last 8 years. This year we have 7525 head of mature cows, coming 2nd calf heifers, and replacements on record compared to 7500 head a year ago. Calving season should be well under way by the 3rd week of January, with at least 65% of the calving complete by the end of March.

**Pregnancy Rate**

Overall, the average pregnancy rate on all classes of cattle was 91.45% compared to 91.6% a year ago.

A general rule of thumb for pregnancy rate is 92% for mature cows and 2nd calf heifers, and 95% for replacements. On the average, it looks like the mature cows and the coming 2nd calf heifers met or exceeded the goal, while the replacements fell way short.

**Pregnancy Rate**

| Preg Rate | Ave | Min | Max |
|---|---|---|---|
| Mature Cows | 92.8% | 86.1% | 100% |
| 2nd Calf hfrs | 95.5% | 80% | 100% |
| Replacements | 82.7% | 45.5% | 100% |

**Projected Calving Pattern**

We have also tried to get some idea of the projected calving pattern, or the percentage of cattle calving per 20-day cycle. The projected calving period is just an estimate of the percentage of cows calving in three consecutive 20-day periods (cycles). This is based on the individual cows projected calving, with the projected start date using the bull turnout date or A.I. date if they were available.

The projected calving period can give us an idea if there were any problems occurring during the breeding season. For instance, if the cows were slow to come back into heat after calving due to low condition scores, or other reproductive problems, then conception in the 1st cycle would be low. If there were bull problems later in the season, then conception in the 1st cycle may be acceptable but the conception in the 2nd or 3rd cycles may fall short.

The goal that is commonly used for conception per cycle is 65% in the 1st cycle, 85% by the 2nd cycle and 100% by the 3rd cycle. Since accuracy of fetal aging by the veterinarian varies by the stage of pregnancy, probably the most important number to look at is the percentage of cows bred within a 60-day breeding season (the 3rd cycle). The average conception per cycle for this year where as follows..

**% Conception/Cycle**

| | 1st | 2nd | 3rd |
|---|---|---|---|
| Mature Cows | 47.8% | 73% | 90.8% |
| 2nd Calf hfrs | 57.4% | 82.8% | 95.2% |
| Replacements | 60.8% | 80.4% | 90.9% |

As you can see, there were obviously some late cows across the different herds that we preg checked this year. Many of the obvious late cows were culled at preg check time before they became a problem at calving. Those

late cows that show up at calving time should be culled because cows that are a cycle or two behind the rest of the herd will ***never*** catch up!

### Condition Score

Of the measures that we look at condition score probably gives us the best picture of the cow's nutritional plane. Condition scoring is a subjective estimate of the cow's fat reserves. Adequate condition is important because it is linked to reproductive performance, affecting rebreeding rate, calving interval, calf vigor and colostrum score. Numerical scores were assigned to each cow from 1(emaciated) to 8 (extremely fat).

**Body Condition Score**

| Class | Average | Min | Max |
|---|---|---|---|
| Mature Cows | 5.08 | 1 | 8 |
| 2nd Calf hfrs | 5.07 | 3 | 6.5 |
| Replacements | 5.66 | 5 | 6.5 |

Our goal is for the mature cows and 2nd calf heifers to have a condition score between 5 and 5.5, while the replacements should have a condition score between 5.5 and 6. As you can see, on the average all classes of cattle fit into these ranges. The outliers will probably need special attention prior to calving. Cows with a condition score of 4.5 or less may need to be fed separate from more aggressive cows in the herd in order to gain enough condition prior to calving. The cows on the other end of the spectrum (condition scores of 7 or 8) should be investigated. These cows may be gaining weight at the expense of their calves. Obese cows also have a higher incidence of calving difficulty. At any rate, these cows represent an inefficient use of feed resources.

For the first time since we have started keeping track of the preg check data, we have seen ranges in condition score from 1 to 8 in the mature cows. There were 5 head of cows that had condition scores of 7.5 or greater. These cows were all bred up well, but at what cost? There were several older cows with condition scores of 1-3. Most of these cows were thin because they were old and to no surprise, most of them were also open.

**Pregnancy Rate vs. Condition Score**

| Condition Score | Pregnancy Rate |
|---|---|
| <=3.5 | 81.5% |
| 4 | 90.1% |
| 4.5 | 95.3% |
| 5 | 94.8% |
| 5.5 | 95.3% |
| 6 | 94.8% |
| 6.5 | 95.9% |
| >=7 | 86.3% |

Above is the distribution of pregnancy rate vs. condition score. The optimal range for body condition score is between 5 and 6. The above chart shows preg rate decreasing when the condition score is less than 4.5. It also shows the average preg rate for cattle with condition scores over 6.5 actually decreases.

### Cow Weight

Of the herds that we preg checked, only about 12% of them weighed their cows. That being said, we were still able to see quite a range in weights amongst the different classes of cattle.

**Weight at Preg Check**

| Class | Average | Min | Max |
|---|---|---|---|
| Mature Cows | 1357 | 980 | 1900 |
| 2nd Calf hfrs | 1171 | 968 | 1438 |
| Replacements | 1025 | 806 | 1380 |

The general trend in regard to cow weight has been increasing since we have been keeping track of pregnancy data. The eight-year average for mature cow weight is 1320# compared to this years average of 1357#.

Some producers have been weighing their cows at preg check time to get an idea of cow efficiency in terms of percentage of dam weight weaned (calf weaning wt./cow preg wt. X 100). Depending on calf age at weaning, most producers would expect their cows to wean 40-50% of their own weight. Simply put, this means that the average cow would have to wean a calf weighing 679 pounds in order to wean 50% of her weight! On the extreme end of the spectrum, that 1900# cow would have to produce a calf weighing 800# to produce 50% of her weight. Couple that improbability with the fact that she would eat about 12 more pounds of grass per day compared to the "average" cow. With feed resources as limited as they are, it may be worth taking a hard look at the heavier cows and making sure they are producing enough to justify keeping them.

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic INC

# Calculating Grazing Time on Cornstalks

It may be a little late now, no thanks to the snow that we currently have and the ground and the snow that we no doubt will soon be getting, but here is a method of calculating the number of grazing days on a field of cornstalks. According to Dr. Rick Rasby at UNL, crop residue is related to grain yield. With high producing hybrids, there should be about 16 pounds of dry leaf and husk per bushel corn yield per acre.

Therefore, if a field produces 160 bushel/acre, then there should be about 2560 pounds of dry leaf and husk residue per acre. Now some of that residue disappears due to trampling and other factors so figure about 50% utilization, which leaves us with about 1280 pounds of grazable residue per acre.

Now we can convert our pounds of grazable residue to AUMs. An AUM (Animal Unit Month) is the amount of forage that is required to maintain a 1000-pound cow or equivalent for one month. It has been determined, that a 1000-pound cow will consume about 680 pounds of dry matter monthly. Therefore, this particular field will provide 1.88 AUMs/acre. If this field is 125 acres, then there is a total of 235 AUMs available for grazing in this field.

Now let's assume we are planning on grazing 100 head of gestating cows on this field, we need to calculate the number of days that they can graze this field. Let's assume the average

weight of these cows is 1360. That means that each one of these cows requires 1.36 AUMs per month. Therefore, a total of 136 AUMs is required to feed this herd for a month. This field has 235 AUMs available for grazing so it should last about 1.72 months or 52 days.

Keep in mind that this calculation is just a starting point and is in no way a substitute for actual observation of residue disappearance. This calculation also does not figure in loss in stalk quality due to deteriorating weather conditions or just simply the natural deterioration that occurs over time.

There is also an Excel spreadsheet available for download online at http://agmanagerstools.com. Not only does this spreadsheet calculate the available grazing days using the same equation, but it also takes into account, the cost of the stalks, the cost of transporting the cattle to stalks, and the costs involved with checking the cattle and water.

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic INC

# Now's the Time to get Ready for Calving Season

Even though many of you will not start calving until February, the staff at Twin Forks Clinic has created a checklist to help you get ready for calving season.

- Make sure that all calving facilities are clean and freshly bedded.
- Make sure that chutes and restraining equipment are clean and in good working order
- Make sure calf pullers, o.b. chains, and o.b. handles are clean, in good working shape and available just in case you need them.

Other items that you might include on your checklist...

**Equipment**

- Calf Saver (resuscitation device)
- Fluid Feeders (One for new calves, one designated for scouring calves)
- Calf weigh tape
- Calf warming equipment for cold weather stress.

**Medications and Supplies**

- Nolvasan disinfectant (for chains and other equipment)
- OB lube or soap
- Iodine solution for navels
- Artificial or frozen colostrum
- Oxytocin
- Short acting Penicillin
- Uterine Boluses
- OB Sleeves

**Records and Identification**

- Tags (special orders 2-3 weeks in advance)
- Buttons
- Taggers and Tagger Pins
- Marking Pens
- Calving Record Book (Available at Twin Forks Clinic)

**Scouring Medications and Supplies**

- Bluelite C (oral fluid/electrolyte supplements)
- Naxcel/Excenel
- TMS boluses
- Fluid Feeder (one designated strictly for scouring calves)
- Syringes
- Needles
- Balling gun

**Other Products**

- Calf Claimer
- Alpha 7 (7way given at birth to prevent overeating)
- Autogenous Red vaccine (Colstridium perfringens type A)
- Multimin (Injectable trace mineral supplement)

When it comes to treating scouring calves, the two antibiotics that we recommend are Excenel and Trimethoprim/sulfamethoxazole (TMS tabs). For severe cases, Excenel can be given at 2cc per 100 pounds body weight once daily for 3-5 days. TMS tabs can be given 1 tab orally per 80 pounds body weight once daily for 3-5 days on the less severe cases. These antibiotics are to be used individually, not in combination therapy. If no response is seen after using either of these antibiotics, it is time to consult your veterinarian.

Nuflor is not recommended for treatment of scours because it kills the normal bacterial populations of the digestive system in calves. Baytril and A180 are ***illegal*** for use in the treatment of calf scours.

Since most causes of scours are not bacterial in nature, supportive care (i.e. oral fluids, warm environment, nursing care) is usually more or as important than antibiotic therapy. It is important to remember that if calves are scouring, their fluid requirements **double**. Therefore use of electrolyte supplements like Bluelite C may be needed to prevent dehydration. If calves become progressively more dehydrated, become weak, depressed or unable to stand, they need veterinary assistance since I.V. fluid therapy is probably warranted.

A word about colostrum management, make sure that calves nurse within the first 6 hours of birth to help make sure they get satisfactory passive immunity from the dam. Calves that are weak or sluggish may need to be bottle fed colostrum or a colostrum supplement like Lifeline to get going.

Natural colostrum is best either fresh out of the cow or frozen. One thing to remember about frozen colostrum is that it should only be kept for about a year. Also, frostfree freezers are not the best for long-term colostrum storage because these freezers go through cycles of freezing and thawing that can allow the colostrum to partially thaw, thus reducing the storage life of the colostrum.

Kevin L. Cawthra, Animal Scientist, Twin Forks Clinic

# MCOOL is Coming, Are You Ready?

Mandatory Country of Origin Labeling (MCOOL) was passed into law in 2002, however implementation has been delayed until September 2008. Calving season is just around the corner and producers need to know what is necessary to qualify for U.S. origin labeling.

The main purpose of COOL was to provide consumers with information needed to make informed decisions concerning their purchases, specifically involving that of the products country of origin. A secondary purpose of COOL was to promote U.S. food products. This law requires retailers to inform consumers, by use of labeling, of the country of origin of "covered commodities". Beef, Pork, and Lamb are included in the list of "covered commodities".

There are three distinct product-labeling requirements for COOL:

• U.S. only origin – According to the law, beef will be labeled as a U.S. product only if it "is exclusively born, raised, and slaughtered in the United States". Cattle from Alaska and Hawaii will be included if they are transported for 60 days or less through Canada to the U.S.

• Foreign only origin – The voluntary guidelines state this applies to products produced entirely outside the U.S.

• Mixed origin – The guidelines indicate a product of "mixed origin" must be labeled according to the country of birth, the country of raising, and the country of slaughter. A potential label for such a product may be "Born in Country X, Raised in County Y, and Slaughtered in the U.S.". This labeling requirement also applies to mixed or blended products, such as ground beef, if it comes from different countries of birth, raising or slaughter.

All cattle in the U.S. on January 1, 2008 will be considered cattle born and raised in the U.S. Beef from cattle imported after January 1st will be required to be labeled by the country of origin. The burden of proof is on the domestic producer. For beef from your cattle to be labeled as U.S. beef you will need to prove it, otherwise it will be labeled as beef originating from a list of countries (Product of U.S., Canada, and/or Mexico). While the specific details to prove country origin have not been established, cattle produced under a PVP (process verified program), or a QSA (Quality System Assessment) will be eligible.

More details are available on the USDA web at www.ams.usda.gov/cool. Some of the possible supporting records listed on this website include, but are not limited to:

- Birth records
- Shipping, receiving and transportation records
- Purchase records
- Animal identification system
- Sales receipts
- Feeding records and bills
- Animal inventory records
- Performance records
- Health records

It would appear that if enough documentation is kept, a paper trail maybe all that is needed to verify country of origin. If producers are not already keeping such detailed records, they should consider doing so, not simply to comply with COOL, but to improve their ability to make sound management decisions as well.

We would encourage you to stay abreast of the information that will certainly become available in the following months concerning COOL. If consumers are in fact willing to pay more for U.S. products as some surveys have indicated, then you could potentially make more money with the records that you are already keeping!

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