

Ag Newsletter

February 2020

It is time to begin the early evening feeding of the spring-calving cows

Glenn Selk, Oklahoma State University Emeritus Extension Animal Scientist

Each year in December, it is time for a reminder to change the feeding schedule for part, if not all of the spring-calving cow herd.

It is generally accepted that adequate supervision at calving has a significant impact on reducing calf mortality. Saving every calf is always important to the bottom line, but takes on additional urgency when profit margins are narrow. On most ranching operations, supervision of the first calf heifers will be best accomplished in daylight hours and the poorest observation takes place in the middle of the night.

The easiest and most practical method of inhibiting nighttime calving at present is by feeding cows at night; the physiological mechanism is unknown, but some hormonal effect may be involved. Rumen motility studies indicate the frequency of rumen contractions falls a few hours before parturition. Intraruminal pressure begins to fall in the last 2 weeks of gestation, with a more rapid decline during calving. It has been suggested that night feeding causes intraruminal pressures to rise at night and decline in the daytime.

The concept is called the Konefal method. A Canadian rancher, Gus Konefal reported his observations in the 1970's. In a follow-up Canadian study of 104 Hereford cows, 38.4% of a group fed at 8:00 am and again at 3:00 pm delivered calves during the day, whereas 79.6% of a group fed at 11:00 am and 9:00 pm actually calved during daylight hours. In a more convincing study, 1331 cows on 15 farms in Iowa were fed once daily at dusk, 85% of the calves were born between 6:00 am and 6:00 pm.

Kansas State University scientists recorded data on 5 consecutive years in a herd of spring calving crossbred cows at the Kansas State University Agricultural Research Center at Hays, Kansas. They recorded the time of calving (to within the nearest one-half hour). Births that could not be estimated within an hour of occurrence were excluded. Cows were fed forage sorghum hay daily between 4:00 and 6:00 pm. For statistical purposes, the day was divided into four-hour periods.

Between 6:00 and 10:00 am, 34.23% of the calves were born;

Between 10:00 am and 2:00 pm, 21.23% of the calves were born;

Between 2:00 and 6:00 pm 29.83% of the calves were born;

Between 6:00 and 10:00 pm, 8.41% of the calves were born

Between 10:00 pm and 2:00 am, 4.4% of the calves were born

Between 2:00 am and 6 am, 1.91% of the calves were born

It is interesting to note that 85.28% of the calves were born between 6:00 am. and 6:00 pm. This is very similar to Iowa data when cows were fed at dusk. , **Feeding the forage in the early evening hours undoubtedly influenced the percentage of cows calving in daylight hours.** (Jaeger and co-workers. Abstracts 2002 Western Section of American Society of Animal Science.)

At Oklahoma State University, with cows that had round-the-clock access to big round bales, but the supplement was fed at dusk, 70% of the calves came in daylight hours. Some producers choose to put the big bales of hay inside a fenced pasture or lot. The gate to the hay area is opened in the evening to allow cows access to the hay bale(s), then the cows are herded out of haying area to another pasture the following morning to graze throughout the day.

Although, the Konefal method does not let us completely skip the middle of the night heifer checks, this strategy should help us save more calves that need help at delivery and shortly thereafter.

Signs of impending calving in cows or heifers

Glenn Selk, Oklahoma State University Cattle Emeritus Extension Animal Scientist

As the spring calving season begins, the cows will show typical signs that will indicate parturition is imminent. Changes that are gradually seen are udder development, or making bag and the relaxation and swelling of the vulva. These indicate the cow is due to calve in the near future. There is much difference between individuals in the development of these signs and certainly age is a factor. The first calf heifer, particularly if she has the genetic makeup for heavy milking, develops udder for a very long time, sometimes for two or three weeks before parturition. The swelling and relaxation of the vulva can be highly variable too. Most people notice that Brahman influence cattle seem to change in this area much more than cattle from other breeds.

Typically, in the immediate 2 weeks preceding calving, the udder is filling, and one of the things that might be seen is the loss of the cervical plug. This is a very thick tenacious, mucous material hanging from the vulva. It may be seen pooling behind the cow when she is lying down. Some people mistakenly think this happens immediately before calving, but in fact this can be seen weeks before parturition and therefore is only another sign that the calving season is here. The immediate signs that usually occur within 24 hours of calving would be relaxation of the pelvic ligaments and strutting of the teats. A protein hormone called "relaxin" is produced by structures on the ovary and is highest in concentration the last 24 hours prior to calving. This hormone causes the softening of the collagen in the pelvic ligaments and the cervix.

Due to this surge of relaxin, and the relaxation of the pelvic ligaments, a subtle, but noticeable sunken depression can be seen in front of the pin bones. These can be fairly dependable for the owner that watches his cows several times a day during the calving season. The casual observer who is knowledgeable of the signs but sees the herd infrequently may have difficulty accurately predicting calving time from these signs. The relaxation of the pelvic ligaments really cannot be observed in fat cows, (body condition score 7 or greater). However, relaxation of the ligaments can be seen very clearly in thin or moderate body condition cows and can be a clue of parturition within the next 12 - 24 hours.

These changes are signs the producer or herdsman can use to more closely pinpoint calving time. Strutting of the teats is not really very dependable. Some heavy milking cows will have strutting of the teats as much as two or three days before calving and on the other hand, a thin poor milking cow may calve without strutting of the teats. Another thing that might be seen in the immediate 12 hours before calving would be variable behavior such as a cow that does not come up to eat, or a cow that isolates herself into a particular corner of the pasture. However, most of them have few behavioral changes until the parturition process starts. Sources: [Effect of Relaxin on Parturition in Ruminants. L.L Anderson, Iowa State University Leaflet A.S. R1465.](#) and [Calving Time Management of Beef Cows and Heifers, Oklahoma State University Extension](#)



Muskogee County Cattlemen's Association Calendar

April 4, 2020- county bred carcass auction 6 pm at the osu extension office

April 18, 2020- Stocker calf weigh in from 10-12 at b. k. & sons wiedel ranch

May 16, 2020- Tentative date for cattle working demo day

July 11, 2020- Tentative date for educational hay clinic

contact the osu extension office for questions 918-686-7200

Cattle market factors to watch in 2020

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

The new year brings with it several changes in ongoing market dynamics, some new opportunities, and some new risks and continuing challenges for cattle and beef markets. The watch list of beef and cattle market factors includes the typical suspects including trade; domestic demand; supply dynamics; competing meats; and feed and input markets. However, changes in several factors towards the end of 2019 suggest a somewhat different tone for markets in 2020.

The international market situation is somewhat clearer now after trade disruptions and uncertainty strangled many agricultural markets for much of the past two years. The likely completion of the revised NAFTA agreement (USMCA) in the coming weeks removes a significant source of uncertainty for agricultural markets. A new bilateral trade agreement with Japan will restore a more competitive position for beef and should stop the erosion of U.S. market share, which became very apparent in that important beef export market in the second half of 2019. Though details are currently lacking, the anticipated Phase 1 trade agreement with China is expected to significantly improve the trade situation for numerous agricultural markets and may allow beef to begin building a meaningful market position in the rapidly growing beef market in China.

African Swine Fever will undoubtedly be a major factor affecting protein markets globally in 2020. The disease has caused a current pork deficit in China and other Asian markets and is found in numerous other countries in Europe and Africa. The exact magnitude of impacts are uncertain and there is no indication that the disease will be effectively controlled any time soon. The reduction in global meat production will support all protein markets and is expected to boost U.S. exports of pork, poultry and beef in 2020.

The beef supply situation is expected to be more supportive in the coming year with cyclical herd expansion over and beef production peaking. The current status of the cattle cycle will be confirmed in the Cattle inventory report to be released the end of January. In general, cattle numbers are expected to be down slightly year over year. Beef production is expected to peak fractionally higher in 2020 with heavier carcass weights offsetting a slight decline in cattle slaughter. Carcass weights finished 2019 above year earlier levels and will bear watching in the coming year.

Total U.S. meat production will once again push to new record levels in 2020 with beef, pork and poultry all at or near record levels. Trade improvements will be critical to provide a strong international component of meat demand in addition to domestic demand. Overall, improvements in net meat trade (more exports and fewer imports) are expected to offset a significant portion of increased meat production and limit the growth in domestic meat consumption.

There are risks that could challenge beef markets in the coming year. Global trade tensions, though reduced, will continue to add uncertainty to markets. Geopolitical tensions, the U.S. presidential election, energy prices and currency values will all contribute to market volatility and could negatively affect input costs and consumer spending. The U.S. economy is projected to slow a bit more year over year in 2020 and continues to be vulnerable as sluggish growth, which is riding on low unemployment and strong consumer spending, masks underlying weakness in manufacturing and investment. In summary, 2020 offers better opportunities for cattle and beef markets but producers are advised to keep an eye on a host of macro-economic and global factors, as well as evolving cattle market conditions, and proceed with caution.

Sustainable Parasite Control in Cattle

John Gilliam DVM, MS, DACVIM, DABVP

Cattle producers and veterinarians have enjoyed the benefits of highly effective internal parasite control products for many years. Strategic use of these products has allowed producers to maintain high levels of production from their animals even in the face of significant parasitism challenges. However, traditional models of parasite control in cattle may not be sustainable into the future. Frequent, long-term use of anthelmintic (deworming) products can select for parasite populations that are resistant, meaning those parasites are no longer killed by the anthelmintic product. Sheep and goat producers are well aware of the challenges caused by the development of resistance in parasite populations.

Anthelmintic resistance in cattle parasites has been slower to develop and receives less attention when compared to the issues in small ruminant production. One reason that resistance in cattle parasites is less recognized is related to the biology of the most important parasites. In small ruminants, the most important parasites are blood feeding parasites that can cause life-threatening anemia. Resistance is easy to recognize when animals continue to become anemic and even die after being dewormed. The most important parasites of cattle are not blood feeders. The primary effect of these parasites is decreased production, which is usually sub-clinical and difficult to recognize.

Anthelmintic resistance in cattle parasites has been documented in cattle from most geographic regions within the United States. Resistance to all classes of anthelmintics has also been documented. That doesn't mean every operation is going to have resistant parasites but the potential is there, particularly when the same products have been used for long periods of time. The types of products used can also influence the development of resistance. As the dose of anthelmintic reaching the parasite becomes reduced or more variable, the likelihood of resistance increases. Pour-on products are convenient and easy to use but have been shown to result in lower and more variable doses of the product reaching the parasites. Some studies have shown that resistance is more common when pour-on products are used.

The only way to recognize the presence of resistance in a population of parasites is to test for it. Producers can no longer assume that their parasite control program is effective just because the cattle seem to be doing well. Testing for resistance presents some challenges but can be done effectively with a little extra effort. Currently, the most effective way to detect resistance is called the Fecal Egg Count Reduction Test (FECRT). A fecal sample is collected prior to an animal being treated with an anthelmintic and then another sample is collected approximately two weeks later. If the egg count in the post-treatment sample is reduced by less than 90 percent compared to the pre-treatment sample, evidence of resistance exists. Most veterinarians can perform the fecal egg counts or the samples can be sent to the Oklahoma Animal Disease Diagnostic Lab. A general recommendation is to test at least 20 randomly selected animals or to test the entire group if there are fewer than 20 animals in the group.

One important concept in the fight against resistance is the idea of refugia in parasite populations. Refugia means that some parasites are not exposed to anthelmintic treatment and, therefore, are not selected for resistance. Refugia helps keep the resistant genes diluted in the overall parasite population resulting in reduced, or at least slower, development of resistance across the parasite population. Refugia is commonly maintained in sheep and goats using the FAMACHA© System in which only animals showing signs of significant anemia are dewormed. Unfortunately, maintaining refugia in cattle parasite populations is less straightforward and research studies identifying the most effective methods to maintain refugia in U.S. cattle production systems are lacking.

If resistance is detected, a variety of steps can be taken to provide adequate parasite control and slow the development of further resistance. Using combinations of anthelmintic products, altering grazing management strategies, and alternate grazing by another species are all possible tools in the fight against resistance. Producers are encouraged to discuss testing for resistance with their veterinarian and to work with their veterinarian to develop sustainable parasite control strategies that will remain effective well into the future.

John Gilliam, DVM, MS, DACVIM, DABVP, is an associate professor of food animal production medicine and field services at Oklahoma State University's College of Veterinary Medicine. He is a board-certified diplomate in both the American College of Veterinary Internal Medicine and the American Board of Veterinary Practitioners (Food Animal)

Strong finish for 2019 beef production

Derrell S. Peel, Oklahoma State University Extension Livestock Marketing Specialist

Sharply higher carcass weights recently have boosted beef production; though another round of winter weather currently hitting parts of cattle feeding country may temper that in the last few weeks of the year. After spending much of the year below year ago levels on a weekly basis, carcass weights moved sharply higher in October and November, not only approaching seasonal peaks but higher year over year compared to the same period last year. Steer carcass weights likely peaked in mid-November at 912 pounds, though weights have dropped only one pound from that level in the most recent two weeks of data. In 2018, steer carcass weights peaked one week earlier at 904 pounds. Steer carcass weights have averaged 7.5 pounds higher year over year for the past eight weeks of data. For the year to date, steer carcass weights are still down year over year but are now down just 2.7 pounds compared to last year.

Heifer carcass weights likely peaked at 742 pounds the third week of November and have dropped two pounds since then. One year ago, heifer carcass weights peaked the last week of November at 838 pounds. Heifer carcass weights have been higher year over year for the past seven weeks but have averaged 4.0 pounds below year ago levels for the year to date.

Sharply higher carcass weights recently reflect better feedlot conditions and performance in the last quarter of 2019 after lots of struggles earlier in the year. Data from the KSU Focus on Feedlots shows that average daily gains in feedlot were down through the first three-quarters of the year with simultaneously poor feeding efficiency resulting in higher feed to gain ratios over the same period. The result was lower carcass weights despite the fact that days on feed were higher year over year for the bulk the year until recently.

Steer and heifer slaughter is projected to be up about 0.8 percent year over year compared to 2018 with total cattle slaughter up about 1.2 percent at 33.4 million head. Combined with modestly lower carcass weights, total beef production for 2019 is projected to be up 0.6 percent year over year at 27.0 billion pounds, just a few pounds shy of record U.S. beef production in 2002.

Poor feedlot conditions and performance likely contributed to a reduction in Choice grading percentage that extended from late in the second quarter well into the fourth quarter of the year. The result has been an unusually wide Choice-Select spread in the second half of the year that has only recently narrowed back to more typical levels for this time of year. Since June, the weekly Choice-Select spread has averaged \$22.84/cwt., compared to \$12.09/cwt. for the same period last year. The most recent weekly Choice-Select spread was \$14.67/cwt.

Boxed beef prices peaked in mid-November with a weekly value of \$240.66/cwt. for Choice and \$215.52/cwt. for Select. The current mid-December level of \$219.14/cwt. for Choice and \$204.47/cwt. for Select compares to Choice boxed beef at \$213.11/cwt. and Select at \$201.61/cwt. one year ago.

Forages Meeting

February 19th noon OSU Extension Office Forage and herbicide meeting

This Meeting will cover:

Late winter fertility on cool season forages, spring fertility on warm season and spring Herbicide options.

Speaker will be Mr. Brain Pugh NE. Area Agronomist.

Muskogee County Newsletter

is published by the following:

Muskogee County OSU Ext. Center

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Important Dates:

February 19, 2020
Forge Meeting OSU Extension Office

February 25th –29, 2020
Muskogee County Livestock Show

March 2nd– 7th, 2020
Muskogee Regional Livestock show

Editor:

Todd Trennepohl

Extension Educator

AG/4-H Youth Development

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Issued in furtherance of Cooperative Extension work, acts of May and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Oklahoma Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Dean of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 85 cents per copy. 1/20



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MUSKOGEE COUNTY 4-H NEWSLETTER