

The Latest Across the Plains

Timely Reminders

- ◆ Use at least two methods of fly control.
- ◆ Deworm cows and bulls.
- ◆ Test bulls and make sure they have an adequate diet including mineral.
- ◆ Review your heat synchronization program and time-line.
- ◆ Put up shades.
- ◆ Make sure that waterers have enough space, recharge rate, and are cleaned weekly.
- ◆ Review your implant program with us.
- ◆ Review diets with current feed costs.
- ◆ Optaflexx® is profitable to feed to conventional feedlot cattle the last 28 days prior to slaughter.
- ◆ Keep pens scraped.
- ◆ Implant suckling calves going to pasture.

Unused Feed

“Perfection is not attainable, but if we chase perfection we can catch excellence.” – Vince Lombardi

Save Money \$\$\$ Test Your Feeds

Tests are relatively inexpensive, usually costing less than \$18, for the information derived. Contact our office to set up an appointment to have us pull feed samples if we have not done so yet.

What's New in the Industry

Zoetis has released a high concentration form of Lutalyse called Lutalyse HighCon as well as a 200 day implant line known as Synovex One.

We want to hear from you...

Do you have a question you would like one of the nutritionists to address in depth in our newsletter? Just submit your question through our website www.GPLC-Inc.com and we will get to work on it.

Calendar of Events

- **May 8** Mother's Day
- **May 11** Kansas State University Anaplasmosis Symposium, Salina, KS
- **May 21** Armed Forces Day
- **May 30** Memorial Day
- **June 1 - 9** National Cattlemen's Beef Association - Young Cattlemen's Conference, Denver, Chicago, and Washington D.C.
- **June 8** Sandhills Cattle Association Convention, Valentine, NE
- **June 8 - 9** Nebraska Cattlemen's Association Midyear Meeting, Broken Bow, NE
- **June 10 - 12** Missouri Cattlemen's All Breeds Junior Show, Steakfry, and PAC Auction, Sedalia, MO
- **June 13 - 14** Colorado Cattlemen's Association Convention, Colorado Springs, CO
- **June 14** Flag Day
- **June 14** Cottonwood Cattlemen's Beef Royale, Lamber-ton, MN
- **June 14 - 15** Illinois Beef Association Summer Conference, Springfield, IL
- **June 14 - 17** Beef Improvement Federation Symposium, Manhattan, KS
- **June 19** Father's Day



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Summer Management Considerations for Maximizing Cowherd Performance

By Jason Warner, Ph.D., Nutritionist

The transition from spring into summer is a welcome sight for many, and is an exciting time of year for cow-calf producers. Warmer weather, longer days, and green grass are a well-received change from the challenges of winter, especially for those of us with spring-calving cowherds. Being rewarded for this year's calf crop currently on the ground, as well as achieving a high conception rate to ensure next year's, starts with a sound approach to cowherd management this summer. While it seems Mother Nature throws something different at us every season, the summer can bring a variety of frustrating management challenges for producers to contend with. My objective with this discussion is to review some of the typical challenges we see in the cowherd during the summer, and identify ways to best mitigate those challenges.

Fly Control/Pink Eye: Managing fly populations in pastured cattle is clearly one of the greatest challenges producers face during the summer. Any plan to mitigate fly loads will be most effective if implemented early in the season when populations are low. Waiting to act until later in the season after fly populations have increased will be much less effective. Recent data (Mays et al., 2014) collected in Oklahoma indicated that horn fly populations on cows increase throughout the season, peaking in August at approximately 500 flies per cow. As a group, we have found that the most beneficial fly control programs include a systems approach, and that using at least 2 methods of control is most efficacious. Fly control should also be implemented from the time of the last hard freeze in the spring until the first hard freeze in the fall. Obviously, this will vary depending on your location and the particular year.

The three most common fly species that affect cattle on pasture include horn flies, face flies, and stable flies. Horn flies are blood-feeding insects that contribute to poorer gains and lowered milk production. Some data suggest they feed 20 to 40 times per day (Arther, 1991). Additional data from several studies (Morgan and Bailie, 1980; Riha et al., 1981; Block and Lewis, 1986; Minar et al., 1987) show increased milk production in cows treated for horn flies. Likewise, other data from the University of Nebraska demonstrated an improvement in calf weaning weights by up to 20 lb when horn flies were controlled on the cows. Face flies are non-biting and feed on secretions from the animal. When such flies feed near the eye tissue, it causes damage and is a primary means of the development and spreading of pinkeye. Certainly, the economic losses from pinkeye associated with reduced weight gain, milk production, and lowered body condition are significant. Stable flies also feed on blood, but reside mainly on the legs and lower belly area of the animal. The bite from stable flies is obviously very painful since it causes cattle to stomp their legs and bunch up together. Performance losses from stable flies can be similar to that seen from horn flies.

Various treatment options have been used over the years with differing results for controlling fly populations. For horn flies, dust bags and rubbers are economical methods but are effective only if cattle use them and they are treated with insecticide. Sprays and pour-ons can be very effective at reducing fly loads, but cattle must be gathered and handled. For stable flies in the adult stage, sprays can be the most effective but it is challenging to adequately apply the spray to the legs of the cattle. We always highly recommend cleaning up and removing any wasted feed or old bedding remaining in the pasture from the previous winter, as these areas are perfect for stable fly breeding. Mist-sprayers are very convenient and can be taken directly to the cattle on pasture, but this will be a more costly treatment method. Fly-tags are most effective if 2 tags per adult animal are used and the class of insecticide used is rotated annually to prevent fly resistance.

There are three different feed-through products available for use that reduce fly populations. These products can be effective if fed at the appropriate label-indicated level, but should not be used as the only means of fly control or expected to entirely eliminate fly problems. Altosid® IGR (s-methoprene) is an insect growth regulator which prevents the development of horn flies. Rabon™ is an oral larvicide that controls face flies, horn flies, and stable flies by killing their larvae in the manure. The final product is ClariFly® (diflubenzuron) which prevents development of flies by interrupting the life cycle of all fly species. ClariFly® previously was approved only for cattle fed in confinement, but

the ClariFly® Concentrate 8% may now be fed to cattle on pasture. Fly populations and associated challenges with pinkeye are always a challenge during summer, but effective fly control measures generally help minimize the occurrence of pinkeye. It is always suggested that producers be proactive and start fly control measures early in the season, rather than waiting and then being forced to be reactive once fly populations grow.

Foot Rot: Another persistent issue commonly seen during summer is foot rot or poor hoof health. Moisture is an underlying cause of many foot problems, which become magnified during wet summers. When cattle bunch up to fight flies or seek shade, they often create muddy areas or they will stand in ponds to escape biting stable flies. If cattle spend an excessive amount of time standing in mud and water, their hooves naturally soften making them more prone to cracking and infection. *Fusobacterium necrophorum* or *Bacteroides melaninogenicus* are the primary bacteria contributing to foot rot, both of which are common. It is nearly impossible to prevent all incidences of foot rot, but there are some management and nutritional strategies that can help reduce its prevalence. Although not always the most practical, one of the most effective approaches is to simply keep cattle out of mud and water. If feasible, consider fencing ponds and creeks so cattle only have limited access. Regarding nutrition, a growing amount of research is showing that zinc and iodine play an important role in hoof health and preventing issues such as foot rot.

Anaplasmosis: Anaplasmosis is an infectious disease that is receiving much attention, and rightfully so, because recent reports from Kansas State University suggest that it is occurring more frequently and in many areas that have not previously encountered the disease. Anaplasmosis cases can be seen year-round, so it's not a strict summer-time issue, but it is transmitted among animals by ticks, flies and mosquitoes. Thus, conditions during the summer that promote the proliferation of vector insects can increase the prevalence of anaplasmosis. Additionally, any piece of animal processing equipment that comes in contact with blood can be a route for the disease to transmit mechanically. Another factor likely contributing to the spread of this disease is that cattle are much more mobile now than in previous years. Caused by a parasite, *Anaplasma marginale*, in red blood cells of infected cattle, symptoms include anemia (pale skin), extreme nervousness or aggressive behavior, weight loss, decreased appetite and milk production, abortions, and in severe cases death. The most effective tool we have to prevent and control anaplasmosis is feed-grade chlortetracycline (CTC). For beef cattle over 700 lb, the concentration of CTC in the feed must supply 0.5 – 2.0 mg per lb of body weight per day to control anaplasmosis. For example, feeding a mineral containing 5,600 g per ton of CTC at 4 oz. per head per day to a 1400 lb cow would provide 0.5 mg CTC per lb of body weight per day. Feeding CTC will require a veterinary feed directive (VFD) beginning January 1, 2017, so this summer is a great time for producers to develop a veterinary-client-patient relationship with their veterinarian if they have not already done so. Having an established veterinary-client-patient relationship will make it much easier to obtain a VFD from a veterinarian, and that VFD will be required before a producer can purchase feed medicated with CTC from their supplier. Consult with both a veterinarian and your nutritionist to determine if anaplasmosis is present in your area and what steps should be taken if it in fact is.

Fly control and pinkeye, foot rot, and anaplasmosis are a few of the issues we may need to address during the summer grazing season. These conditions are all time consuming, aggravating, and expensive. Not all challenges can be prevented, but they can be minimized with management and nutrition. The old adage that an ounce of prevention is worth a pound of cure still holds true in the cowherd. For more discussion and details on programs for the cowherd this season, contact any of us at Great Plains Livestock Consulting, Inc.

Water: The Forgotten Nutrient

By Zeb Prawl, M.S., Nutritionist

Water is one of the most important nutrients involved in the growth and maintenance of a cattle herd. Ironically, it probably is the last nutrient considered when evaluating the performance of the high performing (or not so high performing) herd. The role of water in all living animals, including humans, is vital. Without it, life doesn't exist. And if it is of poor quality, per-



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formance and well-being suffer.

Water is needed in the body for a variety of reasons including regulation of body temperature and the digestion, absorption, and utilization of all other nutrients in the diet. The typical adult mammal contains 60% water. It is present in every cell in the animal. Animals that drink clean, contaminant-free water generally are less apt to get sick, they gain more weight, and they produce more milk. Thus, it is important to carefully consider water quality, quantity, and availability in regards to the animal's overall well-being.

Water Quality. Water sources for cattle can be contaminated by a number of things including minerals, bacteria, microorganisms, and algae. These contaminants can affect water in many ways, including appearance, odor, and taste of the water. Some or all of these factors can also play a part in how cattle accept the water as their drinking source. When water intake is suppressed in cattle, feed intake will decrease. This leads to a decrease in weight gain of the cattle. However, if water is contaminated from the variety of sources already listed, then weight gain can also be compromised even if water intake is normal. Because of this, it is important to know what is in the water sources for your cattle.

A study at South Dakota State University clearly illustrated the effects of poor water quality on water intake, feed intake and performance of growing steers. In this study, researchers compared rural water to well water and pond water. Steers were fed a diet consisting of grass hay and wheat midds from June to September. Steers given rural water drank more water, ate more feed, gained more weight, and were more efficient than steers on well and pond water, with the difference between rural water and other sources all being significant. In the study, water from the well and pond were much higher in Total Dissolved Solids (TDS) and sulfur than the rural water was. Results are given below:

Table 1. Effects of water quality on growing yearling steers.

| | Rural Water | Well Water | Pond Water |
|------------------------------|-------------|------------|------------|
| ADG, lbs/day | 1.38 | 1.02 | 1.02 |
| DMI, lbs/day | 17.7 | 16.5 | 16.8 |
| Gain/Feed | .078 | .061 | .061 |
| Water Intake, gal/day | 12.6 | 10.9 | 11.1 |
| Morbidity, % | 0 | 25 | 15 |

Source: Patterson, et al. SDSU. Beef 2003-15

In another study conducted in Canada over a 3 year period, yearling cattle were evaluated drinking water from one of 3 sources: 1) clean water coming from a well, a spring, or a river, 2) water piped from an underwater pipe into a waterer below the pond where the pond was fenced out and 3) drinking directly out of a pond. Over the course of 3 years, the cattle drinking from the clean sources gained 23% and 20% more weight than the cattle drinking from piped water from a pond and from the pond directly, respectively. Additionally, when they looked at cow/calf pairs on these same drinking sources, weight gain in the cows was 13% and 25% greater for cows drinking clean water vs the piped water and from the pond directly. Calf gains also followed this trend. Clearly, having a source of clean, contaminant free water produces higher performing and healthier cattle.



Figure 1. Pond water system and photo of water sample from pond.

Water Quantity. It is easy to misjudge how much water livestock might need, depending on the season. Cattle in general will need anywhere from 50 – 100% more water in the summer as they will in the winter. Particularly as we head into the summer months, water is used to help cool the animals down and keeping up with the needed amount of water is important for all sizes and classes of cattle. The following table illustrates the amount of water needed by different classes of cattle according to body weight and ambient temperature. Make sure that your water tanks, automatic waterers, and other water sources can provide the given amounts of water to the given amount of cattle on a daily basis.

| Approx. total beef cattle water intake/day | | | | | |
|--|------|------|------|------|------|
| Temperature in °F | | | | | |
| Weight | 40° | 50° | 60° | 80° | 90° |
| Lb. | Gal. | Gal. | Gal. | Gal. | Gal. |
| <i>Growing Heifers, Steers, Bulls</i> | | | | | |
| 400 | 4.0 | 4.3 | 5.0 | 6.7 | 9.5 |
| 500 | 5.3 | 5.8 | 6.6 | 8.9 | 12.7 |
| 600 | 6.3 | 6.8 | 7.9 | 10.6 | 15.0 |
| <i>Finishing Cattle</i> | | | | | |
| 600 | 6.0 | 6.5 | 7.4 | 10.0 | 14.3 |
| 800 | 7.3 | 7.9 | 9.1 | 12.3 | 17.4 |
| 1,000 | 8.7 | 9.4 | 10.8 | 14.5 | 20.6 |
| <i>Wintering Pregnant Beef Cows</i> | | | | | |
| 900+ | 6.7 | 7.2 | 8.3 | | |
| <i>Lactating Cows</i> | | | | | |
| 900+ | 11.4 | 12.6 | 14.5 | 17.9 | 18.2 |
| <i>Mature Bulls</i> | | | | | |
| 1,400 | 8.0 | 8.6 | 9.9 | 13.4 | 19.0 |
| 1,600+ | 8.7 | 9.4 | 10.8 | 14.5 | 20.6 |

Water Availability. When it comes to water availability, one has to keep in mind that water is a precious resource. As the world population grows, this will only become more and more evident. Particularly in cases of open range and pasture country, seasonal effects and weather patterns can be very detrimental to water availability. Conservation of water is key and when done efficiently can greatly add to the value of the land. An example of this is brush control. For example, it is estimated that mature eastern red cedars can consume as much as 35 gallons of water per day. As shown in the table, this would be enough to sustain at least 2 cows through the winter in a given amount of area. One can quickly calculate that one acre of land infested with 20 mature cedar trees not only impedes the grass from growing due to cover, but also would suck 700 gallons of water from the soil every day. In comparison, many mature hardwood trees have been shown to consume as much as 150 – 250 gallons of water a day from the ground. In doing so, these trees prevent springs from running and providing water to animals that are grazing the land and grass that is trying to grow. So even if you think that those trees on your land aren't hurting animal performance, there may become a time when they could if it affects your water availability. Remember that water is not only important in your cattle nutrition program, it is vital. Without it, cattle cannot survive long. Additionally, water quality is just as important. If you don't currently do so, test your water samples and continue to monitor the quality of it. As things constantly change in our environment, so can the water. Water tests can be run by most labs that do forage and feed testing, with typical test packages costing \$35-\$40 per sample. The information derived can be very valuable in helping to prevent a future issue or diagnosing a current one.





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