

COW/CALF CORNER

The Newsletter

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Summertime water requirements for the cow herd

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During hot summer months, the water needed for a cow herd often determines several other management decisions. To best assess the adequacy of water quantities in surface water or from wells or "rural water" supplies, it first is necessary to have an idea of the amount needed for cattle of different sizes and stages of production that you may have during the summer on the ranch.

[A University of Georgia publication](#) (Rossi and Pence, revised by Dyer, 2012) lists the estimated water requirements for cattle in different production stages if the daily high temperature is 90 degrees F. They suggest that the amount of water required can be estimated by the production stage and the weight of the cattle. For instance, a lactating cow needs 2 gallons of water per 100 pounds of body weight. A non-lactating cow or bull needs just 1 gallon of water per 100 pounds of body weight. If you are estimating water needs for your cattle, be honest about the weight of the cows in the herd. Many cows today weigh 1200 pounds or more (some a lot more). Therefore expect that most spring calving cows will need at least 24 gallons per day for themselves and another 5 to 10 gallons of water for their calf. Also recognize that some summer days in Oklahoma get even hotter than the 90 degrees used in the Georgia paper. On days with extreme heat, expect the water usage to go up even further.

Can storage of vaccine affect its efficacy?

Gant Mourer, Beef Value Enhancement Specialist Oklahoma State University

Respiratory disease in cattle also known as BRD, shipping fever or pneumonia may cost the U.S. cattle industry over \$2 billion annually (Powell 2013). Management techniques can offset much of this cost and having a good vaccination program can maintain the health of a calf all the way through the production system. A vaccine can cost over \$3.00 a head, and if not stored properly that vaccine can be rendered ineffective. Producers cannot afford to overlook the importance of how they store vaccine and handle it prior to injection.

Biological products should be stored under refrigeration at 35 to 45⁰F unless the nature of the product makes storing at a different temperature advisable (APHIS 2007). If vaccines are not stored within this temperature range, efficacy to the calf can and will be reduced. Killed vaccines are especially susceptible to freezing temperatures. Freezing a killed vaccine will alter the adjuvant or delivery system of a killed vaccine. This, in turn, negatively affects the immune response to the antigen in the vaccine. Modified live viruses (MLV) are more stable but can be in-activated if they are repeatedly cycled above or below the required temperature range (Gunn et al, 2013). Also, once activated by mixing, MLV's effective life will be reduced to 1-2 hours and need to be maintained at the 35⁰ to 45⁰ F. This can be accomplished by only mixing the doses that you will use at that time and use a cooler to maintain temperature while working cattle.

Researchers from the University of Arkansas and Idaho analyzed the consistency of temperatures for different types, ages and locations of refrigerators over a 48 hour period. They found that only 26.7% and 34.0% of refrigerators were within the acceptable temperature limit 95% of the time, respectively. Refrigerator location can also effect temperature. Refrigerators located in barns (35.6⁰F) were colder than in mud rooms (41.72⁰F) and kitchens (40.82⁰F). (Troxel and Barham 2009). Temperature within a 24 hour period can also be highly variable for individual refrigerators. Troxel and Barham (2009) demonstrated some refrigerators may take up to 8 hours to cool down to the 45⁰F required or temperature can drop below freezing and range from 28.4⁰F to 44.6⁰F, while others will remain too cold varying from 24.8⁰F to 35.6⁰F over that period of time.

Producers need to be aware of these variations in temperature so they are able to adjust refrigerator temperature as needed. Thermostats can also be very variable from unit to unit, so keeping a thermometer inside works well to monitor and to make adjustments as need. Simple indoor-outdoor thermometers work well to achieve this goal. The outdoor unit can be placed in the refrigerator while the LCD display can be hung with a magnet on the door. This allows temperature to be monitored without opening the door and many models will record the high and the low temperature in a 24 hour period so producers can adjust accordingly.

How a producer handles vaccine outside of the refrigerator is important as well. Coolers can easily be modified for syringes and are important to maintaining vaccine efficiency chute side. Using a 1 ½' PVC pipe or sink tail piece purchased at any hardware store and a 1 ½' hole saw, inserts can placed through the cooler and work well to keep syringes cool and out of light while in use. Either ice or freezer packs can be used as a coolant to maintain temperature for several hours depending on outside ambient temperature. Make sure that enough coolant is used to maintain temperature while working cattle and extra ice may be needed if working cattle all day

or during warm days. It may also take up to an hour for the cooler to reach the needed 45⁰F, so producers may need to plan ahead prior to processing cattle.

These are a few simple suggestions that can help ranchers get the full value of the vaccine that they purchase. More importantly, positively affect the health of their herd, decrease sickness, and increase profit.

Summer cattle market conditions

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

Summer officially started this past weekend and cattle markets so far have shown little of the seasonal pressure that has been expected. Fed cattle prices have strengthened counter-seasonally the past three weeks and cattle slaughter has continued down year over year. Feedlot marketings are expected to increase in June but the sharp spike in feedlot supplies that was implied by earlier placements may not materialize that way. Strong fed markets in May likely pulled some cattle forward while others may get pushed into July thereby smoothing out the June peak. June marketings will increase and fed prices will likely drop back but perhaps with less pressure than earlier anticipated.

The June Cattle on Feed report showed May marketings down four percent but, with one less business day this year, daily average marketings were equal to one year ago. May placements were down seven percent, as expected, leading to a June 1 on-feed total down 2 percent from last year. Placements of cattle under 700 pounds was actually up nearly three percent compared to last year (including a ten percent increase in placements under 600 pounds). At the same time, placements of cattle over 700 pounds were down 12 percent indicating that feedlot supplies will tighten significantly into the fourth quarter of the year. May feedlot placements were heavily oriented to the Southern Plains with year over year increases in Texas and Kansas placements while Nebraska and Iowa placements were sharply lower than last year. This brings the June 1 Texas feedlot inventory above the Nebraska total for the first time since January.

More rain fell across most of western Oklahoma this past weekend continuing a steady pattern of rain since Memorial Day. Most all of Oklahoma has had rain with totals ranging from about 3 inches to over 10 inches in some locations. Much of the state has received more than 100 percent of normal rainfall in the past thirty days which begins to whittle away at the rainfall deficit from earlier in the year. The lack of deep moisture means that drought conditions still exist and could redevelop rather quickly if rainfall is interrupted. Summer heat and wind will make it difficult to recharge subsoil moisture. Meanwhile, forage has responded dramatically to recent moisture and current conditions are better than indicated by the drought map. Though starting late, enough pasture and hay production is underway to meet summer needs in most cases.

Feeder prices in Oklahoma have continued to edge higher but may be near a peak. In this last week's Oklahoma 7-market average, all Medium and Large, Number 1 steers less than 850 pounds were priced at over \$200/cwt. The value of added weight gain on feeder cattle has increased in recent weeks as heavy feeder prices have increased more than lightweight feeder

prices. Cull cow prices have remained strong as well with no seasonal decrease yet. Average dressing boning cow prices were \$110.50/cwt this past week. Prices for bred cows continue to strengthen with young to middle-age bred cows trading mostly in a range from \$1500-\$2300/head, depending on quality.

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