Bluestem Breezes
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Mud Mitigation

With the recent snowfall, followed up by rainfall, many of our cattle pens are indeed muddy. It is an interesting thought that I might dedicate a column to mud control when we are living amidst drought-like conditions. But, as is so often said in regards to weather, "This is Kansas!"

So, in that regard, it makes perfect sense – sort of. Nonetheless, the feed pens are still mud-ridden as I write to you. And, in order to stay in business we must analyze every facet of our operations. Deep mud can and will hinder cattle performance, and K-State Feedlot Specialist Chris Reinhardt does a nice job of laying the facts out. Please read on for his "Feedlot Facts":

As cattle people, we grudgingly accept the various natural elements as part of the cost of doing business. Rain, snow, ice, and extreme temperatures are part of life for ranchers and cattle feeders. And each of these factors that forces cattle outside of their comfort zone, called the "thermo neutral zone", steals performance. With respect to mud, however, we know that the cost of fighting mud is high in terms of lost performance, and we can prepare for the inevitability of it.

Researchers have estimated that although pastern-level mud has little effect on performance, hock-deep mud is costly. A 500 lb steer gaining 2.8 lb/day, without any environmental stress, uses exactly half of its daily energy intake just for maintenance. So if the calf is eating 20 lbs of feed, 10 lbs are spent just to "keep the lights on and the furnace running", and only 10 lbs are available for gain. But if calves are on a diet designed to gain 1.5 lb/day, only about 1/3 of the total energy is available for gain.

If calves are gaining 2.8 lb/day and environmental stress (cold, rain, mud, heat) increases the energy requirement by 10%, it also decreases the amount of energy available for gain by 10%. But if calves are only gaining 1.5 lb/day, a similar increase in energy requirement will reduce gain by nearly 20%.

But mud also decreases feed intake, so in addition to the extra energy required to maintain body functions, intake may steal away energy from the other side of the equation. So it's conceivable that gain will be reduced by 1/3 to 1/2 when cattle are fighting deep mud.

Preparing for mud won't totally eliminate these performance costs, but we can reduce the losses:

Mounds within the pen. Cattle should have about 25 ft^2 of mound space per animal on top of the mounds (not including the slopes). Mounds should have a slope of about 1:5 on the sides to facilitate moisture to flow away from the cattle and the 'valleys' between mounds should slope about 3-4% away from the bunk. The end of the mound nearest the bunk should connect to the concrete pad so cattle don't have to slog through deep mud to get from the mound to the bunk.

Increase pen space per animal. Whereas 125 ft^2 of pen space might be adequate during dry conditions in the summer, 350 ft^2 may be barely sufficient during wet conditions. Adapt as conditions dictate. Smooth pen surfaces whenever the weather allows. The longer muddy conditions persist, the worse the pen conditions become and cattle will have an even greater difficulty moving throughout the pen.

Raising cattle has many rewards. By preparing pens for the wet times of the year, cattle can continue to perform up to expectations, even during difficult environmental conditions. Sometimes, if we burn some diesel, we can help the cattle to actually SAVE energy!

For additional information, visit the Extension Office (215 Kansas, Courthouse, Alma; kamayer@ksu.edu; 765-3821). For Bluestem Breezes archives, check out wabaunsee.ksu.edu.