



NUTRITION NOTES

Innovation + Research from Kent Nutrition Group

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ECONOMICS OF MUD AND VALUE OF BEDDING

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I have written and spoken many times about the importance of bedding and keeping yards groomed the best we can, but the weather in December 2015 was so horrendous for environmental impact, I felt compelled to do it yet again.

We all know that mud has a drastic impact on feed conversion and the subsequent effect on ADG, but the table below highlights just how bad mud affects these parameters.

Feedlot Efficiency Mud Effect

| Mud depth, In | 3 | 6 | 12 | 18 |
|------------------------|------|------|------|-------|
| % Increase Maintenance | 7.2 | 10.1 | 36.9 | 79 |
| ADG | 3.34 | 3.09 | 2.45 | 1.68 |
| DMI | 21.3 | 20.5 | 18.9 | 17.2 |
| F/G | 6.39 | 6.65 | 7.71 | 10.21 |
| Cost of Gain \$/cwt | 64 | 66.5 | 77 | 102 |

This is not an actual trial, but increases in maintenance requirements have been measured based on mud depth. So those effects were applied to a theoretical group of cattle with the measured performance for the first group shown here. We also realize that no feed yard would have 18 inches of mud across the whole pen, but the point is to show how the progression is more than a linear response. Also, the cost of gain may not be numerically correct depending on your area, but the relative differences are what's important. Moral of the story, move snow as much as you can and push mud and manure up in a pile even if you can't haul it out.

To combat mud, we have to bed. I realize when it is snowing into a soupy yard, trying to bed seems futile. The trick is to bed early in the winter and establish a bed pack so you have a base to work with before the soup gets deep. The table below shows results of a two-year study done at North Dakota State University several years ago. It should be noted this was under NORMAL winter conditions and not the extreme mess we had this year in December.

Value of Bedding NDSU Trial

| Treatment | None | 3.5 lb Bedding/Head/Day | 5.5 lb Bedding/Head/Day |
|-----------|------|-------------------------|-------------------------|
| DMI | 22 | 22 | 22.2 |
| ADG | 2.83 | 3.69 | 3.53 |
| F/G | 7.63 | 5.81 | 6.21 |

As you can see, the excuse that if I bed, the cattle drop off feed, is not valid. The key is to bed consistently and not just when the pens get sloppy. So if our stalks to bed cost \$100/ton to purchase, get in and out of the pen, we are spending 5 cents/lb for bedding. That makes the daily cost in treatments 2 and 3, 17.5 and 27.5 cents/head/day, respectively. The response is .8-lb ADG, which at \$125/cwt fat cattle translates into a \$1/day response to pay for the bedding. So you can see that even if we have to bed at three times the 3.5 lb/day level, we are still only investing 53 cents for a \$1 return. The question isn't "can I afford to bed?" but rather "can I afford not to bed?"

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