

The Effects of Mud on Your Dairy Cows

John H. Kirk, DVM, MPVM

Extension Veterinarian
School of Veterinary Medicine
University of California Davis
Tulare, CA

Mud in your corrals can depress feed intake, reduce feed efficiency and lead to acidosis and injuries. A recent article on the effects of mud on feedlot cattle could have just as easily been applied to dairy cows. Regions with greater than 20 inches of rainfall each year are at greater risk than those with less than 20 inches. However, this could apply to the central valley of California when it rains 2-4 inches in a few days even though the annual rainfall is probably less than 20 inches.

Here are some of their findings:

4-8 inches of mud can decrease feed intake by 4%-8%

4-8 inches of mud can slow gains by 14%

4-8 inches of mud can reduce feed efficiency by 13%

“Belly-deep mud” can reduce feed intake by 30%

“Belly-deep mud” can reduce feed efficiency by up to 25%

They found that effects of mud are more significant when the cattle are wet and cold. As the mud gets deeper and creates a suction (like when your boot comes off and you step in it with your sock foot!), cattle tend to give up on moving around to the feed bunks. Often the worst place for mud is at the edges on concrete aprons or alleyways. Due to the runoff from the concrete, the mud may be much deeper in these locations than in the rest of the corral.

With the depression in feed intake, they reported that there is an increased risk of acidosis. As the cattle become less willing to fight through the mud to get to the feed bunks, they tend to slug-feed when they do make the effort to eat. Some days they may just lay up and not eat at all. One of the results of acidosis is laminitis, whether subclinical or clinical leading to lameness.

The slippery mud surfaces also led to increased risk of injury. Cows were seen to have trouble keeping their footing as they come down off the bedding mounds. They may also injure themselves when coming off the concrete into the muddy corrals. Slips and falls may be more common on the concrete pads due to accumulation of mud carried onto the pads by the cows. Needless to say, there is more foot rot and hairy foot warts during wet conditions.

Besides the difficulties mud poses for the cattle, it can also be a hazard for the pen workers. Excessively muddy corrals make it more difficult for the pen workers to detect sick cattle. Sick cows in muddy pen tend to just sit and present fewer signs of disease. The pen workers must decide if it is more beneficial for the cattle to be treated when sick and use the extra energy to move to the hospital pens or to stay in the pen without treatment and the stress of moving through the mud.

So what does all the feedlot information mean to the dairy? Certainly, decreased feed intake due to deep mud can be related directly to lower milk production. Like feedlot cattle, dairy cattle become reluctant to wade through deep mud to get to the feed bunks. In the bull pens, the bulls are more likely to lay than to detect heat and take a chance of falling when breeding a hot cow. Both cows and bulls utilize a lot of energy just to get to the bunks that would otherwise be turned into milk or used to breed cows. The subtle result may be more lameness due to acidosis, foot rot and hair foot warts. Certainly injuries are more common due to slips and falls with wet conditions. Mastitis becomes more common due to environmental pathogens and the hospital pen swells to twice or three times normal. The bulk tank somatic tank shoots up. Milkers get grouchy after fighting the mud in the corrals and spending the extra time to prepare the cows for milking.

Some of the problems related to muddy conditions are preventable by proper grading of corrals and the cow mounds. Adding additional bedding under the shades in the corrals can also make the cow more comfortable. Amendments can be used to firm up the junction areas between the concrete pads and dirt corrals. Of course the problems of mud are much less in freestall housing, however, the cost is significant. Dairy men should do what they can to decrease the effects of mud on cow health and production.

Wren G. Manage around feedlot mud. Bovine Veterinarian:5-10, February 2004.