



by Steve Martin

Pen management is part of feeding

THERE is no getting around the fact that cows like mud. While most non-farm folks think of pigs when asked to name a mud-loving farm animal, cows like to get dirty too.

The dairy industry has long worked to convince its increasingly more curious consumers that it cares deeply about how cows are housed. We know that healthy, well cared for cows are not only what consumers want, but they are also the most productive kind. Saying it, however, is not nearly as easy as doing it.

I suppose it is true that clean cows are productive cows, but let's be honest: the deck is stacked against us before we even get started. Cows are by nature not necessarily clean animals.

Whether it is for heat-abatement, fly control, sunscreen or simply due to boredom, cows can get and stay pretty dirty. But once we put them inside a fence at a dairy, mud is somehow cruel. There may be no need to really fight this one, because we know that mud on a dairy is a problem and the goal is to manage pens so cows stay as clean as possible.

I am amazed by the amount of effort made by dairies to work against cows' affinity for mud. Tractors, scrapers, harrows, bedding machines and the like are all used to keep cows out of mud as much as possible.

Pen maintenance is a science just like nutrition and veterinary medicine. But instead of going to graduate or vet school, one needs to understand and study things like traction, slope, base material and drainage.

This is the work of tractors, pull-behind implements and well-trained employees. It is not an easy job and not every dairy farm employee trained to be a pen scraper can make the cut. It's a crucial job at a drylot dairy and if done well the cows will, in fact, stay cleaner.

Clean and dry pays off

There is a long list of reasons why good pen maintenance is good business for a dairy. High milk production, successful reproduction, udder health, milk quality and hoof health are all correlated to pen conditions.

Cows are hard on dirt. They are heavy and all of their weight is focused on eight relatively small claws. It makes for a lot of pounds per square inch. In some instances that weight packs the earth, but when there is moisture present it makes holes – sometimes deep holes!

Watching a cow step off a concrete pad into the great unknown is not good. You can see the worry in her eyes because she is not sure of her footing. The only way to fix this problem is to dig out muddy areas and repack with whatever the preferred material in a particular geography is.

We must work hard to be sure that cows have sure footing. Maintenance helps prevent holes, but a couple of times per year there will likely still be some repair work that is needed. Plan on it; put it on the calendar.

There is a significant amount of engineering

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that goes into the design of a good drylot pen. If done correctly, drainage will help avoid problems. But extended periods of wet weather will challenge even the best design. Keeping the correct amount of bedding in pens will decrease the depth of wet material after a rain. Hoof health will be much improved if pens are not overly deep and wet.

May reduce injuries

Injuries and culling for feet and legs will be lower in a dairy with well-managed pens. While a good slope might help move water away immediately after a rain, if it is too steep footing can be an issue and may lead to slip and fall injuries as well as poor heat detection. Adding material to high traffic areas can increase traction and reduce risk.

Shade pad design and maintenance is an art unto itself. Having an elevated shade will allow moisture to flow away and increase the chance for a dry place where cows can lay, even in wet weather. Increased laying time not only improves hoof health, but is also an important tool for increasing milk production.

Measuring milk fatty acids (De novo fatty acids) is a new tool used to diagnose issues ranging from nutrition to pen density and, yes, even pen conditions. It is amazing that we can look not only at butterfat percentage, but also at the types of fatty acids to make assumptions about the cow. The non-nutrition points of interest have mostly to do with number of meals per day and meal size.

In a muddy pen, after finding no good place to rest, the overly-tired cow finally picks a spot and lays down. Imagine this cow looking at the space between her and the feed bunk. Is it a muddy bog with uncertain holes and slippery surfaces? If so, she will likely delay her next meal and thus make it a bigger meal. Fewer but larger meals come with a multitude of negative production and health risks.

It should be said that in some production systems this entire topic has become moot. Whether it is traditional freestall barns, cross-ventilated barns, or some other design, more and more cows

are being moved into controlled environments. This may be where the whole industry goes in the future, but until then we will have many rain events on many dairies where cows are kept on dirt lots.

Being careful to apply adequate resources to manage these facilities is paramount for the cows, the dairy, and the industry. In addition, different climates can present different opportunities for housing cows in traditional dirt lots. Areas of low annual rainfall may never be ideally suited for indoor-type housing systems.

Yes, cows like mud. But we must also create systems to minimize the potential negative impacts of muddy pens and corrals. And this is not just a cow issue; replacement heifers are affected as well.

While more and more cows may be moving into more controlled environments in the future, I suspect that heifers will be living primarily in dirt lots for the foreseeable future. Failing to carry the same high standards for pen design and maintenance for them will result in lower growth rates, poor hoof health, higher culling, and for sure reduced reproductive performance. As with so many other management tasks on the dairy, please don't forget pen maintenance for heifers and dry cows.

This topic is an example of how an interest by consumers about how we house and manage cows fits right in line with what is the best production and health situation for animals. We all want clean pens that offer cows a good place to live. The problem is the cow's own nature, unpredictable weather, and wear and tear on facilities are steadily working against us.

The effort to win this battle is significant. It is expensive, time consuming and difficult. Doing it well, however, offers the cow the chance to do another thing she likes to do – eat.

Well-managed corrals encourage good intakes in the form of many meals per day. Strong intakes mean higher levels of milk production. Thus, excelling at pen management is truly an important part of feeding for the bottom line.