HOARD'S DAIRYMAN

# How will cows recover from avian influenza?

*by Steve Martin*

AS I have visited dairy producers in the aftermath of the recent onset of avian influenza, a new concern has been noted. For most, if not all dairy producers, this episode is a new experience with many unknowns along the way. It should be noted that there were and are many varied management responses to the unprecedented milk loss on an individual cow basis. No matter if it is in daily milk weights or a monthly milk test, the marked drop and subsequent recovery in production is astonishing.

We dairy folks are "curve" thinkers. Many dairy metrics are nicely displayed in a curve to tell a good story about how the dairy is doing. Most notably is the traditional milk per cow graph we call the lactation curve. As we graphed average energy-corrected milk per cow for our clients weekly, it was dramatic to see the curves turn down when the herd became infected. Now, with much of this in our rearview mirror, we have seen the curve recover and hopefully return to previous levels.

This is mostly viewed on a per cow basis, but another curve that one could look at might be the total pounds shipped. We may see a similar drop but depending on how the dairy decided to respond to individual cow milk declines, it may not have returned to previous levels. This brings me to my potential concern. Is there a feeding strategy that best fits the needs of cows that dropped in milk and have now recovered?

## Many milk unknowns

We should say that the broader curves of average milk per cow or total pounds shipped changed due to dramatic drops in milk for individual cows. Yes, in some way, one may feel that the dairy has maybe turned back toward normal, but can we say the same for those individuals that lost a dramatic amount of milk? I am supposing that individual cows will not return back to normal or somewhere even close.

We know that cows encounter any number of potential negative events during the course of a normal lactation. It may be an individual health event, like mastitis, or even an injury. All cows may have to milk through an extreme weather event that can change the rest of their lactation production expectations. This takes us back to the primary curve of our industry, the lactation curve. This is freshman-level dairy science, but a story will be told about the impact of bird flu when the cows that were impacted complete their lactation. Will their lactation curve show a sharp drop when they became infected with a slow build out over the following weeks? It will be interesting to graph these cow's daily production against the average of the herd or a historical lactation curve that fits a dairy. Will cows return to the production of whatever stage of lactation they were in when the milk drop occurred but never get back to what a predicted curve would have been? This is my supposition, but we will have to wait and see.

There were some general trends discussed for what type of cows by age, lactation, or days in milk were most impacted. I think those general thoughts may be correct, but I will say that we have seen a little bit of everything, and it seems that herds were impacted differently. Remember, just like any insult on a cow during its lactation, the recovery in milk is different depending on what stage of lactation it occurs at. An insult pre-peak will certainly lower peak milk and thus total milk per lactation by a lot, but the cow's ability to recover is better. A cow later in lactation may not even build back the milk and instead hold the reduction until dry-off.

## At risk for transition issues

The concern is that cows that experienced a significant drop in milk are at a greater risk of becoming over-conditioned during the remaining days of their lactation. They will milk less than they would have, and the question is, will they read the nutrition book and also eat less feed? If they don't, they may add extra body condition, putting them at risk for transition problems in their next lactation.

It is important to keep an eye on late lactation body condition and be ready to react to this scenario. I am not sure we can plan for it or do anything different now since the percent of cows that were seriously impacted probably wouldn't qualify for a pen move that used a lower energy diet, but maybe it would. Reproduction success was also dampened during the sickness. Thus, there will be some cows milking a bit longer due to slower breeding, and this will elevate the risk of over-conditioning.

We should also offer a note of concern for cows that were dried off early due to extreme milk loss. This presents a quandary and may require a low-energy dry cow pen. It is well known that drying cows off early by even a month or two poses a significant risk of transition problems at calving. Manage any cows that were dried off early appropriately. Limit feeding a far-off dry cow ration may sound like a crazy idea, but with adequate bunk space and a bulky ration, it can be done successfully.

Every day was a learning curve for us as we helped customers dealing with sick cows. We worked hard to take care of cows during the event. But, as we often say, "This thing will have a tail." We should keep an eye out for what may be different for these cows and be ready to adjust our normal approach to best get them successfully into their next lactation.

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