How do you know if there are restrictions in your parlor?

Jason LeGassick for Progressive Dairyman

AT A GLANCE

Examine the milk path to identify restrictions that may be holding back your herd from even greater milk production.

I am often asked: How do I know if a dairy producer has any restrictions in their milking path? Would it make any difference if they did? Some of the farms posing these questions are getting 100 pounds of milk on average with a low somatic cell count. Dairy producers should ask in return: Are we holding our cows back from their full potential?

Today's cows are producing more, have higher flow rates, and yet we are still trying to milk them through 5/8-inch and 3/4-inch outlets. To allow today's high-producing cows to effectively produce all they are capable of, vacuum restrictions in the milk path must be eliminated. When the system is restricted, milk floods in the claw, vacuum fluctuates and becomes unstable. This will cause milk flow to slow down due to the decreased vacuum, liner movement is compromised, and udder health becomes a risk.

So how can we easily tell if there are restrictions in a dairy's milk path? Dairy producers have known for years that stable vacuum is critical when milking cows. Research has shown this to be factual as well. However, stable vacuum is not something that is easily seen. Most dairy producers do not know if their vacuum is stable or not. The first and perhaps the easiest way of looking for restrictions is to see if your milk hoses are bouncing as the cows milk. Do the hoses bounce a small amount when a low-producing cow is being milked and bounce a lot more when a highproducing cow is milking?

When hoses bounce as the cows



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are milking, this is showing that milk is slugging and the system is flooding as it moves through some portion of the milk path. It could be slugging because your claw does not have a large enough outlet or enough volume to handle the amount of milk the cow is giving. It could also be slugging due to lifting milk. It may also be caused by too small of an inlet on a milk meter, or perhaps the milk meter's hole diameter is too small for the volume of milk the cow is giving.

Another way of knowing if there

are restrictions in your milk path is to have a qualified dairy equipment dealer come out to the milking barn and put a diagnostic device on the equipment. For example, if we

Continued on page 110



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ISSUE 6 • APRIL 1, 2017 PROGRESSIVE DAIRYMAN 109

How do you know if there are restrictions in your parlor? cont'd from page 109

want to check and see if the claw is restrictive, the technician would place a needle inside the claw and monitor the claw vacuum fluctuation. The National Mastitis Council recommendation is less than 3 inches of vacuum fluctuation while the cow is in high flow. What I have found in the field is: As we get the vacuum fluctuation closer to zero, the more economic and health benefits we are able to capture.

The technician should also check to see if there is a vacuum drop over different pieces of equipment in the milking path. For example, the technician would place a needle in the milkline before and after the meter, and if there is any vacuum drop on the top side of the meter over the side closest to the pipeline, then that piece of equipment is restricting milk as it passes through. As a dairy producer, you do not want to see any vacuum drop over any piece of equipment. The technician should also check to make sure milk is not being lifted in any part of the milk path, as this causes restrictions and slugging of the milk.

What happens when there is fluctuation? The milking equipment cannot function properly. If there is a lot of claw fluctuation, then the entire system vacuum will need to be raised to achieve the average claw vacuum required for the liner to function properly. When we have to compensate by raising the system vacuum, what will happen when cows are in low flow at the end of milking or when the cows were not prepped correctly? Those cows are exposed to much higher vacuum than necessary. As the dairy herd production increases and the flow rates increase, the problem of claw fluctuation only becomes worse, and the effects on the slow-milking cows and cows not prepped correctly become worse.

As we eliminate restrictions in the milk path, cows milk out faster, milk production will normally increase, and incidences of mastitis will decrease, along with teat ends becoming healthier. Most herds also see an increase in flow rates, allowing a dairy producer to get more turns per hour out of his milking parlor and get cows back to the freestall barn quicker. How much are we holding cows back from their true potential when we have restrictions in the milk path? Let us eliminate any restrictions, so we can see what our cows' full potential can be. 📩







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