

# CASE STUDY

## MEETING THE CHALLENGE OF REDUCING LAMENESS

*Triple G Dairy in Buckeye, Arizona, switched to an automated foot bath system for improved cow comfort*



**HOOFSTRONG**

Triple G Dairy, a third generation family-owned farm that has been milking cows since the 1950s, takes a progressive approach to solving herd health problems. Yet, addressing lameness remained a persistent challenge due to the combination of high summer temperatures and wet conditions during the area's rainy season.

Currently, the farm milks about 3,600 Holsteins and 900 Jerseys, selling most of their milk into fairlife. During a past herd health audit, the percentage of lame cows was above benchmarks. Skylar Gericke, herd manager, set a goal for the farm then and there: In one year, they would not have to think about lameness.

### A SEASONAL CHALLENGE

In Arizona, lameness challenges occur as heat stress increases in the summer. Cows divert energy to cooling themselves off, weakening immune defenses and leaving hooves open to increased incidence of digital dermatitis, white line disease and sole ulcers. The rainy season lasts from June through September, during which lameness issues again spike due to the constant moisture.

"Older cows were affected the most," Gericke explains. "Fixing lameness has really allowed us to keep cows in for one or two more lactations. We strive for cow comfort. If we do that right, we know the cows are going to be able to do what we need them to do. The added benefit is milk production, longevity of the cow and reproductive performance."

### STARTING FROM THE HOOF UP

The first thing Gericke tackled was the farm's well-used concrete foot bath. "We were doing what everyone else does," Gericke says. "We had a concrete foot bath that was falling apart, and my guys were in charge of changing the chemical. It's something that's at the back of the barn. The employees had other priorities and changing the solution could be easily forgotten."

In November 2023, the dairy selected Specialty Sales, LLC to install an automated hoof bath system throughout the dairy. The highly advanced BOVISTRIDE RX™ continually provides a consistent depth of liquid and chemical concentration to help ensure the last cow through the foot bath receives the same treatment as the first cow. Equipped with smart technology, the system communicates to the manufacturer for management, eliminating foot bath supervision from the list of farm tasks. Triple G Dairy uses HoofStrong LQA Elite™ copper and zinc solution in the automated foot bath for added hoof hardening benefits.

Immediately, Gericke saw a decrease in digital dermatitis. Lameness caused by infectious disease steadily decreased to near zero within about six months.

## HIDDEN COSTS OF LAMENESS

Lameness is one of the top three diseases that affect dairy herds. Cases of clinical lameness are estimated to cost close to 5.5 pounds of milk per day.<sup>1</sup>

Digital dermatitis, or hairy heel warts, is the most common cause. Once a cow has digital dermatitis, the problem cannot be cured — only managed. In one study, scenarios with the lowest rates of lameness included:

1. Housing with concrete floors
2. Preventive hoof trimming
3. Automatic scraping of alleys eight times a day
4. Foot baths

First lactation animals are more likely to get digital dermatitis because their immune system is suppressed due to the stress of their first lactation. All cows are more likely to become lame after calving, as immune suppression also occurs during this period.



"We saw a decrease in digital dermatitis right away," Gericke says. "Since putting in the system, we have had no incidence of severe lameness. We track month-to-month percent lameness closely, and it shows the results right there. Plus, my hoof trimmer has even commented on it!"

### GETTING EMPLOYEE TIME BACK

Installing an automated foot bath system allowed Gericke's crew to spend time addressing other potential causes of lameness in the farm.

"The guy that was in charge of changing the foot bath is now able to focus on other stuff, like sand buildup," he noted. "We pulled power and water into the foot bath area, and the Specialty Sales team set up the system. They show up right away for maintenance, so it takes it off my mind completely."

Gericke strives to prevent herd health problems with a proven plan of action, which is one reason he knew the dairy could meet — and exceed — lameness goals.

"It's hard to say that it definitely increased milk production in the last year — we've changed a lot of things. I can say for sure that cows are staying in the herd longer and lameness is just one of the things we focused on."



## TOP FOOT BATH TIPS

1. Traditional foot baths should be about 10 feet long, allowing each cow to step in the bath twice with each hoof. Auto systems can use less space.
2. Solution depth should be maintained at a minimum of 4 inches, ensuring dewclaws are submerged.
3. Solution concentration should remain at its recommended percentage according to the product label
4. Replacing or changing the foot bath solution is dependent on hoof and leg hygiene of the cows. Solution should be changed after 150 to 350 cows pass through a traditional footbath.

Automatic systems can help modernize these management practices.

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References:  
<sup>1</sup> Fread, E. Lameness: It's Costing You. PennState Extension. Accessed July 3, 2024. Available at: <https://extension.psu.edu/lameness-its-costing-you>.  
<sup>2</sup> Bjurstrom, A. Footbath management. University of Wisconsin-Madison. Spring 2023. Accessed July 3, 2024. Available at: <https://dairy.extension.wisc.edu/articles/footbath-management/>.