PediCuRx® Foot Care Management System

The complete management system for professional foot care
Foot disease cripples your bottom line

Recent reports have declared that foot problems and lameness on today’s dairy operations are costing more dollars per cow than even mastitis. Lameness is the new No. 1 herd health problem! In the last few years, hairy foot warts (digital dermatitis), specifically, have emerged as a serious concern in North America. The warts, which eventually lead to lameness, begin a costly domino effect of herd health problems.

Economic impact

The average cost to treat a lame cow is about $125 to $150 per case. This includes the cost of labor, treatment such as antibiotics, if needed, and any milk withheld. But this number does not include decreased milk production or lower weight due to decreased intake, nor does it include any extra costs associated with extra days open that may occur because the cow missed a heat while lame.* For example, a 1,000-cow herd with a 10% lameness rate could easily have $12,000 to $15,000 in extra costs.


Milk production may drop even before lameness is evident. The following chart shows milk production prior to, and after detection of lameness.

Prevention and treatment

There are several important practices that can be used on the farm to control the introduction and spread of bacteria.

1. New animals should be quarantined for a month before mixing with the rest of the herd.
2. Regular use of an effective germicide/cleaner in a footbath and/or by topical application to prevent, control and treat infectious foot diseases.
3. Routine scraping (2 to 3 times daily) of alleys and other areas where manure slurry might accumulate.
4. Free or tie stalls should be supplied with a plentiful amount of clean, dry bedding.
5. Frequent application of a bedding conditioner (such as ZorbiSan®) to help keep stalls, alleys and corrals dry.
6. Regular hoof trimming by a professional trimmer (2 to 3 times per year).
7. Program for the monitoring and treatment of foot-related problems with the aid and advice of your hoof trimmer, veterinarian, and/or nutritionist.
8. Feeding balanced rations including trace minerals.
The PediCuRx® foot care system

The PediCuRx® Foot Care Management System was designed and developed as one unit, including technology and chemistry to maintain healthy feet.

- Programmable dispensing system for powder or liquid products
- Water jets — rinse and fill footbath with water or treatment solution
- Cross-linked polyethylene footbaths
- Bladder deflates to release liquid; inflates to hold it in the footbath
- Side panels prevent splashing and help speed water flow
- Pre-bath
- Treatment bath
Advantages of the unique design of the PediCuRx® system

Mineral water use — while still providing effective flushing and cleaning of the bath.

Indestructible material — rugged cross-linked polyethylene footbath is virtually indestructible.

Air-operated bladder gate — simple, rugged and performs well in challenging environments.

Pre-cleaning pre-bath — cleans feet before cows enter the treatment bath.

Longer length — 10-foot long footbath allows for frequent “double dipping” of each foot for greater effectiveness.

Angled front entry edge — makes it easier for the cow to step in the bath and diverts flush water away from the bath.

Programmable dispensing system for powder or liquid hygiene products — provides the right amount of product every time, saving time and labor.
PediCuRx® manual or automated technology

The PediCuRx® system is designed to make the use of the footbath as easy as possible, whether it is an automated or manual version.

Manual footbath
Under normal conditions, 150 to 250 cows can pass through the bath before flushing. For dairies this size, the manual footbath system could be the best solution. The bath can be easily prepared before the milking session and cleaned out after milking.
- Controlled and operated by the user
- User adds appropriate amounts of chemicals, and operates air and water valves manually
- A water valve and an air compressor make the operation easier

Automated footbath
If more than approximately 250 cows travel through the footbath during one milking session, the liquid has to be changed during the milking session. In this case the automated version of the footbath would be the best choice, because it allows for the releasing, cleaning and refilling of the bath automatically, which means the operator doesn’t have to stop during the milking session to change the bath. Whether there are one or two exit lanes, if using powder or liquid chemicals, or a combination of both, the automated footbath can be customized to meet the needs of the dairy.

How the system works
- The PediCuRx® control dispenses water, air and liquid chemical to a single footbath
- Can be programmed to fill, drain and flush at timed intervals
- Air line provides compressed air to operate the bladder
- The air bladder inflates to hold liquid in and deflates to drain it
- Nozzels at the entrance of the bath flush out the footbath
- Unique angled design promotes good cow flow to keep the entrance area clean
- Nozzels fill the footbath with water and dispense liquid chemicals

Optional equipment
Second footbath
Option 1: The second footbath allows a treatment bath in two separate exit lanes. A decision valve is required.

Option 2: Both baths are installed in the same exit lane. The first bath is used as a pre-bath and the second is for treatment. A decision valve directs the flow to the appropriate bath.

Second liquid dispenser — enables the control to dispense two different liquid chemicals. Typically, one chemical for pre-treating and another for treatment.

Powder dispenser — each dispenser has two canisters — one canister is emptied with each treatment cycle. Each canister can hold enough chemical to treat 150 to 250 cows. A maximum of two powder dispensers (four canisters) can be used with one PediCuRx® control. Water is dispensed into the canister to carry the powder into the bath.
Additional PediCuRx® components — meeting the needs of commercial dairy producers

The following options were designed to provide large, commercial producers the ability to take advantage of the PediCuRx® automated footbath system and rugged bladder gate technology, while still maintaining their cow flow goals. With these components, producers can automatically flush and fill their baths quickly, use new or existing concrete footbaths, and customize their footbath schedule. The PediCuRx® system brings solutions to producers who need a reliable foot care management program in a commercial dairy environment.

Solution mixer

200-gallon or 300-gallon storage tank — doses up to 400 lbs. of Copper sulfate or Zinc sulfate.

High throughput capacity — treat up to 7,000 cows without refilling.

Simple, precise mixing — pour granulated Copper sulfate or Zinc sulfate into the tank through the 12” opening. Press the start button and the tank fills with water to the proper level automatically.

Internal agitation — the unique nozzle “eductor” magnifies the agitation action by four times. This action mixes the solution quickly and thoroughly.

Automatic dispensing — the PediCuRx® automation control sends a signal to dispense a metered amount of treatment solution to fill the footbath.

Expandable — can be connected to one or two PediCuRx® automated footbath controls for dosing up to four treatment baths.

Corrosion resistant materials — poly tank and poly circulation pump resist corrosion, providing long service life.

7-day timer module

Programs — the day and time of footbath session.

Convenient — with a few touches of a button, program the particular day and time to start and stop the footbath session.

Customize — set the footbath schedule that works for your dairy. Example: Run a chemical footbath on Monday-Wednesday-Friday, and a water solution the rest of the week.

Upgrade — the 7-day timer is a kit module and can be added at any time to your footbath automation control.

NOTE: The solution mixer and 7-day timer module options are available for both the cross-linked polyethylene and concrete footbaths.
MegaBridge

Commercial duty — welded, heavy-duty stainless steel to withstand heavy cow flow.

Unique air bladder technology — low pressure air inflates the bladder and seals the entire width of the footbath. The bladder conforms to irregular surfaces such as manure, dirt and freezing conditions.

Fast draining — bladder deflates quickly and completely so liquids and solids flow out of the bath. This technology uses less water to clean the footbath.

Custom sizing — from 30” to 96”. Designed to fit your new or existing concrete footbath for wider (double and triple) cow exit lanes.

Installs quickly — anchors to existing concrete. Shipped with anchor bolts, sealant, air tubing and pressure relief.

Standard sizes — four standard sizes available, for return lane widths of 36” (3 ft.), 48” (4 ft.), 72” (6 ft.) and 96” (8 ft.).

Footbath manifold and curb

Heavy duty — welded heavy-duty stainless steel housing.

30° entrance angle — allows cows to enter the bath without breaking stride.

Entrance is dimensionally correct — 5” wide by 7” tall.

Installs quickly — anchors to existing concrete.

High capacity automation control

Flush and fill large baths quickly — less down time, more cows treated.

Accommodates large baths — baths larger than 4 ft. wide can be flushed and filled quickly.

High capacity — 1 ½” meter and water valve for flushing and filling large baths quickly.

Operate multiple baths — an optional second bath kit allows operation of two baths.

Footbath cast in concrete manifold assembly

Heavy duty — 1/8” thick stainless steel housing.

High capacity — integral 1 ½” stainless steel tube manifold with adjustable outlets.

Dimensionally correct — the housing is 3” wide by 5” tall and cast into a 7” wide by 8” tall concrete curb.

Custom sizing — from 30” to 96”. Designed to fit your needs for wider (double and triple) cow exit lanes.
PediCuRx® hygiene products

With the PediCuRx® System, GEA now offers dairy producers a complete footbath management system and a complete line of hygiene products to manage foot care. This line of six products offers a solution for any style of management or level of hairy foot wart infection on a dairy. However, with six different products to choose from, it may be confusing to determine which products to use. Therefore, we’ve provided the following recommendations, along with additional information about each product on the next page.

PediCuRx products:
- PediCuRx Pre
- PediCuRx TriFusion
- PediCuRx Complete
- PediCuRx Prevent A
- PediCuRx Prevent C
- PediCuRx Prevent Z
PediCuRx® hygiene
product recommendations

PediCuRx footbath recommendation #1
Powdered Copper sulfate is the most common footbath treatment used on today’s dairies. Therefore, our primary recommendation centers around PediCuRx TriFusion. TriFusion is used in the main treatment bath with half of the amount of a typical Copper or Zinc powdered solution (2.5%). This method was tested using a unique split footbath protocol, and the results proved that the TriFusion combination resulted in a significant reduction of foot wart lesions, but with TriFusion, only half the amount of Copper sulfate was needed. See the next page for these test results.

PediCuRx footbath recommendation #2
PediCuRx Complete is the answer for dairy producers who:
1. Do not want to use powdered Copper sulfate or Zinc sulfate
2. Choose not to use the powder-dispensing option of our footbath, or
3. May want to use only one ingredient in the main treatment bath.

NOTE: Complete can also be used to topically spray or wrap hooves to treat hairy heel warts.

PediCuRx footbath recommendation #3
For dairy producers who prefer alternating different chemicals on a routine basis in their footbath, the PediCuRx Prevent products provide that option. While common rotation schedules are weekly or monthly, we recommend that you always consult with your foot health support team when determining your dairy’s precise rotation schedule.

Keys to success — it is important to remember that no matter which PediCuRx product dairy producers decide is best for their situation, the footbath solution should be changed every 150 to 250 cows, depending on the soil load in the bath, to maintain efficacy. Also, be sure to utilize a foot hygiene program in conjunction with regular and proper hoof trimming, environmental cleanliness and proper nutrition.
PediCuRx® works

In a unique research trial, over a four-week period, two herds were tested with cows walking through a split footbath.

On the left side was the “control”—a typical footbath solution containing a 5% Copper sulfate solution, the most common footbath remedy. On the right side was the “treatment” bath—a 2.5% Copper sulfate solution mixed with the required dosage of PediCuRx® TriFusion.

Feet treated in both sides showed a significant decrease in foot wart lesions, but only half the amount of Copper sulfate was needed when PediCuRx® TriFusion was used.

Use of TriFusion and a reduced volume (2.5%) of Copper sulfate is equal to the efficacy and cost of a 5% Copper sulfate solution typically used in a footbath.

Using the same treatment regimen above of 2.5% of Copper sulfate, along with the required dosage of TriFusion, pain scores went from greater than 80% moderate-severe pain to greater than 80% no pain in a four-week trial.
PediCuRx® helps to reduce the use of heavy metals

Heavy metal compounds such as Copper sulfate and Zinc sulfate have been proven effective against hairy foot warts. However, overuse can cause environmental concerns when they enter the wastewater stream. PediCuRx® TriFusion maximizes the efficacy of heavy metal products while significantly reducing their use.

Reducing Copper sulfate use

Mike Rankin of the University of Wisconsin offers these suggestions for reducing Copper sulfate use.

- Reduce the concentration of Copper sulfate in the footbath
- Reduce the frequency of Copper sulfate use
- Substitute non-Copper products periodically
- Use a clean water footbath ahead of the Copper sulfate bath

The PediCuRx® system lets you do all of the above.

Testimonials

“We have seen significant improvement since starting with PediCuRx® TriFusion and I like that our Copper sulfate usage has been cut in half. Our trimmer and I have been very satisfied with the results. Plus, with the PediCuRx® automation, I can customize our footbaths to dispense only as I want them to. I don’t have to worry about whether my workers are maintaining the baths. In fact, it eliminates the extra labor.”

Joby Blaken / Blaken Farms
Milking 500 cows
Melrose, WI

“We have used PediCuRx Complete topically. Success in reducing lesions has been a major accomplishment. We get the feet clean before we apply PediCuRx® Complete, and do it all several days in a row, watching for incoming fresh cows with lameness. This program works well for our dairy.”

Terry Rowlett
Milking 140 cows
Campbellsburg, KY

“Thanks to the PediCuRx® system, the hoof condition of my herd is the best we have had in five years, due to the success of TriFusion. There’s fewer wraps, fewer unmanageable foot issues and fewer cull cows in the past year since we started the program. The price is competitive due to the fact that I’m cutting my Copper sulfate usage in half. The product does what it says it would do — manage the foot care in my herd.”

Adam Robey
1,240 cows
Adairville, KY

Cut Copper Sulfate Use by 50% with PediCuRx TriFusion

![Graph showing reduction in Copper sulfate use](chart-image)
GEA Group is a global engineering company with multi-billion euro sales and operations in more than 50 countries. Founded in 1881, the company is one of the largest providers of innovative equipment and process technology. GEA Group is listed in the STOXX® Europe 600 Index.