

Final Report: Use of Hoof-Zink Alone or in a Rotation with Copper Sulfate to Prevent Hairy Heel Warts and Foot Rot on Dairy Cows

The objective of this field trial was to use Hoof-Zink as a replacement for copper sulfate in footbaths at a commercial dairy farm to reduce the number of treatment days while controlling the cases of foot rot (*interdigital phlegmon*) and hairy heel warts (*digital dermatitis*).

The 250 head dairy farm used footbaths containing a 6% copper sulfate solution for 10 treatments/week (2 milking/day on Mon. through Fri.; data collected starting November 18, 2005). On June 26, 2006, a 5.5% Hoof-Zink solution was used at 6 trts/wk (2 milking/day on Mon., Wed., and Fri.) to replace the 10 trts/wk of copper sulfate (CuSO₄). On July 24, the 5.5% Hoof-Zink solution was increased to 8 trts/wk (Mon., Wed., Fri. and Sat.). On November 27, 6% CuSO₄ solution was used at 4 trts/wk (Mon. and Fri.) and 5.5% Hoof-Zink solution was used at 4 trts/wk (Wed. and Sat.). Cows marked as lame and those requiring maintenance hoof trimming (dry-off and 100 DIM) were trimmed once a month. Data was collected on incidences for ulcers, abscesses, heel warts, and foot rot at the time of trimming with each foot being recorded as a separate incidence.

The figure below shows the incidences of ulcers, abscesses, heel warts, and foot rot by for the 250 head dairy farm. While using the 6% CuSO₄ solution at 10 trts/wk, the incidences of heel warts average about 12 per month and foot rot averaged about 3 incidences per month. Switching to the 5.5% Hoof Zink solution at 6 trts/wk kept the foot rot incidences similar to 10 trts/wk of 6% CuSO₄ solution, but heel wart incidences increased dramatically. The Hoof Zink treatment was increased to 8 trts/wk and for the August and September test period there were “0” incidences of foot rot and heel warts. In October and November, there were no cases of foot rot, but heel wart cases increased similar to the 6% copper sulfate used at 10 trts/wk. Rotating between 6% CuSO₄ and 5.5% Hoof-Zink reduced the number of heel warts to 5 and 6 incidences for December and January. The number of foot rot cases went up to 5 in December but there were no cases in January.

In conclusion, replacing 10 trts/wk of 6% CuSO₄ (250 lb/wk) with 8 trts/wk of 5.5% Hoof-Zink (180 lb/wk) in a footbath reduced the amount of footbath product by 28% while controlling heel warts as well as CuSO₄. Rotating between CuSO₄ and Hoof-Zink is also an option to control heel warts and reduce the total amount of product used by 24% (100 lb CuSO₄; 90 lb Hoof-Zink).

