

Footbathing in the Management of Papillomatous Digital Dermatitis

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Introduction

Papillomatous digital dermatitis (PDD), or hairy heel warts, continues to be a growing problem among the nation's dairies, and the corresponding profit loss associated with the disease continues to rise. While much of the work to date has focused on the treatment of lesions in lame animals, minimal investigation has been done on pro-active approaches to controlling the spread of PDD. Footbathing is the most commonly used method in the attempt to prevent hairy warts. Often it is used with solutions containing antibiotics, copper sulfate or formaldehyde. Concern has been expressed about the use of such products and the health and environmental consequences of farmers disposing large amounts of these residues into watercourses after treatment. The objective of this study is to evaluate the efficacy of a novel, non-antibiotic compound in controlling papillomatous digital dermatitis when used in a footbath application.

Materials and Methods

The target population of this study consisted of a 250-cow farm in southern Washington state. A pre-trial PDD prevalence survey was conducted on the entire herd. Cows included in the prevalence figure had visible hairy wart lesions and pain scores of 2 based on the classification key developed by Britt *et al* (1999). The farm has one exit lane with one 27-gallon footbath. There is a small retaining area in the return alley which is filled with water and is used as a pre-rinse bath. The

pre-trial protocol consisted of footbathing six times per week (two milkings per day, three days per week). Oxytetracycline was used four times weekly and copper sulfate twice a week. For the duration of the trial, oxytetracycline and copper sulfate are replaced with a 5% solution of West Agro Experimental Product. As with the previous treatment products, all cows milked go through the same footbath. Solution is not replaced mid-herd. The length of the trial is six months. A whole-herd prevalence study is conducted on a monthly basis, with visible lesions and pain scores observed and recorded.

Results and Conclusions

The pre-trial survey of 259 animals resulted in 59 with visible hairy wart lesions and pain scores of 2. At one month, 274 animals were surveyed, 23 of which had visible warts and a score of 2 for pain. Prevalence was reduced from 22.7% pre-trial to 8.4% after one month. Interesting to note is that approximately 75% of the hairy wart lesions at this one-month survey occurred in the right rear leg of the animal. It was observed that for the majority of cows, the left rear hoof is twice submerged when walking down the length of the footbath while the right hoof comes in contact with the solution just one time before the animal steps completely out of the bath. Preliminary results indicate a substantial reduction in the prevalence of papillomatous digital dermatitis after one month of footbathing with the West Agro Experimental Product.