



The organic response to podal treatments in cows

CITREX LIQUID

Efficacy of Citrex in the Treatment of Podal Lesions in Dairy Cows

Introduction

Podal injuries greatly affect the well being of dairy cows and are associated with considerable losses as a result of reduced milk production (2 to 15%), a deficient reproductive performance (up to 40 days of interval between birth and estrus that causes more insemination attempts), and increased antibiotic treatments. Premature sacrifice of a cow due to low production, low reproduction efficiency and mastitis is common. White line disease and ulcers are the most common causes of limping and copper sulfate, as well as formaldehyde are the most frequently used products to treat this problem. Both products are highly toxic to the personnel, cows and the environment. Copper sulfate has an additional disadvantage, since it affects the hoof structure, reducing its strength.



Picture 1. Footbath treatment

Methodology

To determine Citrex's efficacy as a treatment for podal injuries, a field trial with a high production Holstein-herd was performed on a dairy farm located in the south of Chile. This dairy farm had two footbaths with a capacity of 150 liters, located at the entrance of the feeding pen. Footbaths were used routinely twice a week. On Mondays copper sulfate (2%) was used and formaldehyde (2%) was applied on Thursdays. The incidence of podal injuries was evaluated in a commercial herd of 300 cows and each type of injury was characterized. Later, the same group underwent a treatment with Citrex, adding the product to the footbaths to a concentration of 1000 ppm, 4 times a week, for a period of 4 weeks. Before and during the trial all of the livestock were kept in a stable and exposed to the same management and feeding on a concrete cement floor pen.

Results of the podal injuries evaluation of 300 cows before and after applying Citrex to footbaths four times a week during a four week period.

PATHOLOGIES	Before using Citrex	After using Citrex	Affected animals (difference)	Improvement %
No Podal Lesions	119	198	+ 79	39.9
Ulcers	74	51	-23	31.1
Digital Dermatitis	50	25	-25	50.0
White Line Disease	18	6	-12	66.7
Wall Cracking	9	-	-9	100.0
Interdigital Dermatitis	10	5	-5	50.0
Necrobacillosis	5	5	0	0.0
Others	15	10	-5	33.3



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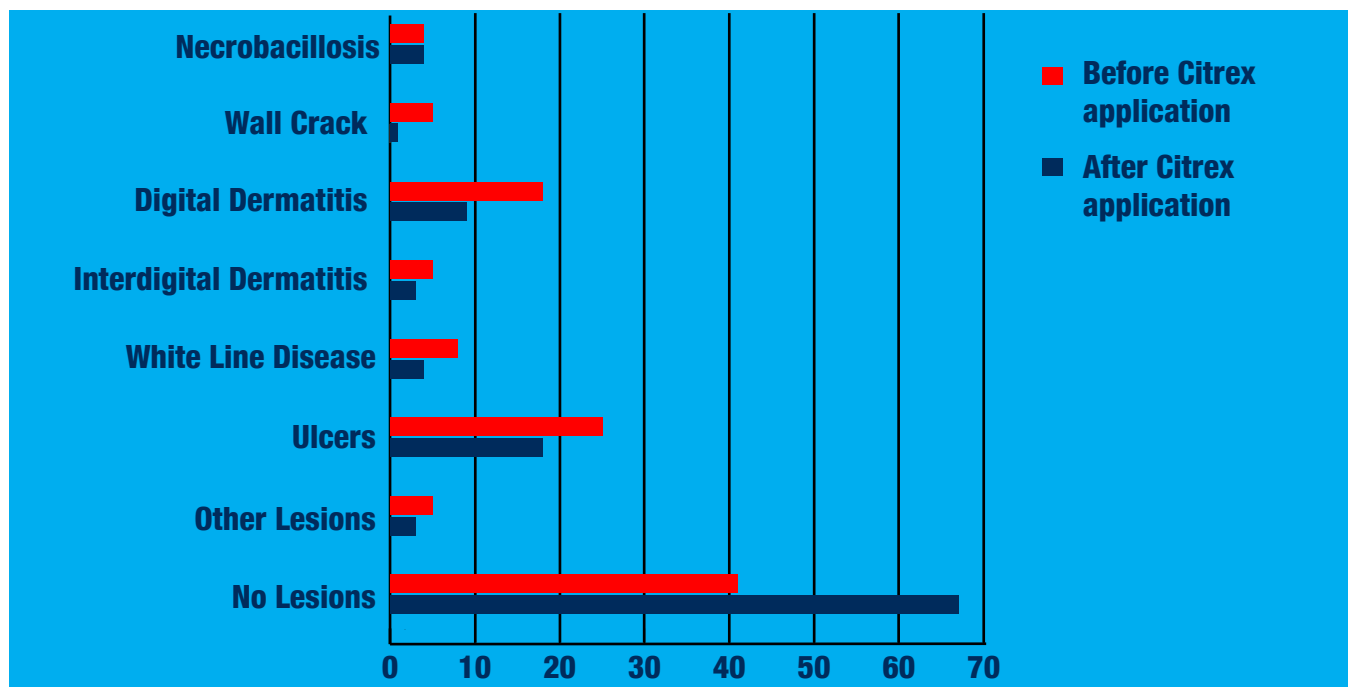
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Results

At the beginning of the study 119 cows (39.6%) out of a total of 300 evaluated did not present podal lesions. After 4 weeks of treatment with Citrex, 198 cows (66%) out of 300 did not show podal lesions. This represents an improvement of 39.9% after using the product. Lesions associated with bacterial and fungal infections as interdigital dermatitis, digital dermatitis, white line disease and ulcers were reduced after treatment with Citrex. The percentage of reduction for those lesions was the following:

- Ulcers - 31.1%
- Digital and interdigital dermatitis (both) - 50%
- White line disease - 66.7%
- Other lesions 33.3%.

Comparison of the evaluation of podal injuries in 300 cows before and after treatment with Citrex.



Conclusion

The use of a footbath containing 1000 ppm of Citrex, effectively reduces the incidence of the podal injuries associated with bacterial and fungal infections. Citrex is a new product available for the dairy producer with a better efficacy than the disinfectants traditionally applied to control this type of injuries. Citrex is 100% organic with a highly biocidal potency, active even in the presence of organic matter, non toxic or irritant for the cows, personnel and the environment.

Reference: M. Palma, S. Valdés and D. Zaviezo "Evaluación de la actividad microbiocida de Citrex en terapias podales en Ganado lechero". Presented at the 11° Pan-American Milk Congress in Belo Horizonte, Minas Gerais. Brazil. 2010.