

Model Hide Square Study¹ Through Finalyse® Application System

PURPOSE

Study the efficacy of Finalyse® on *E. coli* O157:H7 on cattle hides using a commercial spray system and phage levels found in commercial facilities.

EXPERIMENTAL DESIGN

- The experimental procedure was replicated two times
- Eighteen hide sections were used in each replicate — nine for control (water-sprayed) and nine for Finalyse-sprayed
- Cattle hides were placed on heating pads and marked in ~1,000 cm² areas
- *E. coli* O157:H7 bacteria (10⁶/1,000 cm²) were applied to all squares and allowed to dry for ~60 minutes
- Three “before” samples were taken ~45 minutes after the bacteria were applied
- Finalyse or water (control) was then applied to the hide squares using the Finalyse Application System™
- Six “after” samples were taken ~45 minutes later
- The control (water-sprayed) samples were completed first followed by the Finalyse-sprayed samples



SAMPLE COLLECTION AND PROCESSING

All samples were collected using aseptic techniques. Standard microbiological techniques were employed as well as the utilization of common broths and agars for O157:H7.

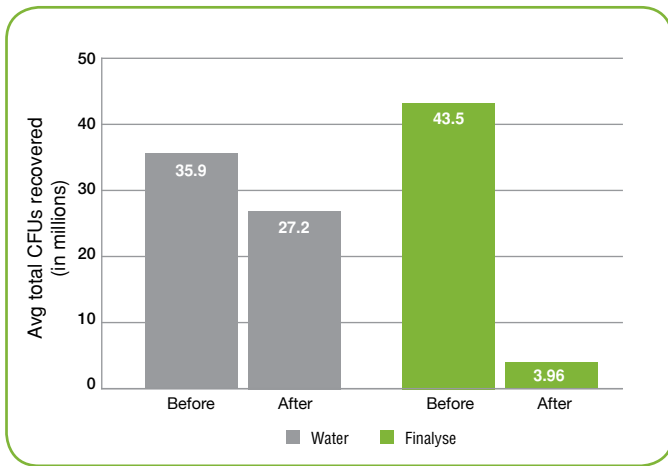
RESULTS

- The Finalyse-sprayed hides showed ~1_{Log} reduction of *E. coli* O157:H7 levels vs. the control (water-sprayed) hides in the combined replicates
- The Finalyse Application System being used in commercial facilities was effective in reducing the *E. coli* O157:H7 load on inoculated cattle hides in a simulated model study

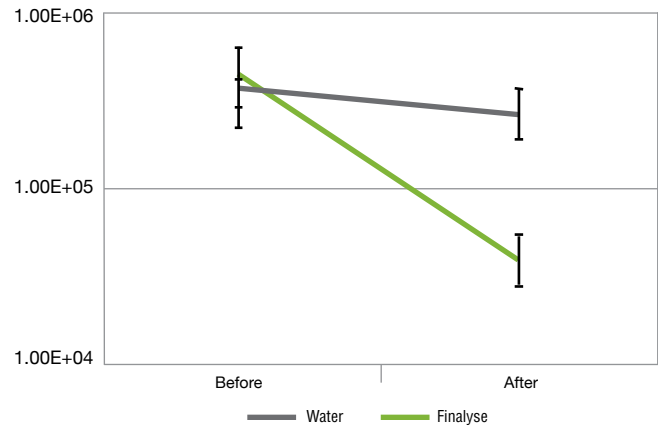
DATA

Combined Results (Replicates Nos. 1 and 2)

Treatment group	N	Avg total CFUs recovered	Std error	Min	Max
Water - before	6	3.59E+05	6.06E+04	1.66E+05	5.77E+05
Water - after	12	2.72E+05	8.04E+04	3.50E+04	9.24E+05
Finalyse - before	6	4.35E+05	2.09E+05	1.10E+05	1.45E+06
Finalyse - after	12	3.96E+04	1.20E+04	0.00E+00	1.20E+05



Finalyse Reduction of 1_{Log} of *E. coli* O157:H7 vs. water



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¹Elanco Study No. GN3US100005. 2010. Data on file.

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