



CERTILLUS™

**Targeted Microbial
Solutions**

CERTILLUS ECO BEDDING:

**Use recycled manure
solids for bedding
without the tradeoffs.**



#ScienceHearted

At ARM & HAMMER™ we think big on a microscopic level to deliver safe feed and food solutions that drive business forward. We're your #ScienceHearted, local-and-global, animal and food production team.

A costly \$444 per cow tradeoff?

While recycled manure solids (RMS) can be an attractive dairy bedding source, they might also bring unwelcome tradeoffs.

For example, popular, acid-based bedding treatments only provide limited protection against environmental pathogens, while potentially putting the safety of your employees at risk.

And untreated RMS could leave your herd even more vulnerable to those pathogen threats, which could lead to high somatic cell count (SCC) and environmental mastitis. Since a single mastitis case costs approximately \$444 per cow per case in lost milk, vet expenses and overall productivity,¹ it's essential to find a way to use RMS without tradeoffs.



What if you could use RMS as a sustainable manure outlet *without* the tradeoffs?



PREMIUM PROTECTION.

Reduce the threat of high SCC and lost milk quality premiums and deductions.



AVOID MASTITIS.

24/7 targeting of environmental pathogens to reduce risk of environmental mastitis.



EMPLOYEE PRODUCTIVITY.

Employees waste less time treating infected cows and retreating solids from intermittent bedding treatments.

Count on CERTILLUS™ Eco Bedding to:



Safely and effectively use beneficial bacteria to target pathogenic threats in your RMS bedding



Help lower SCC and improve productivity



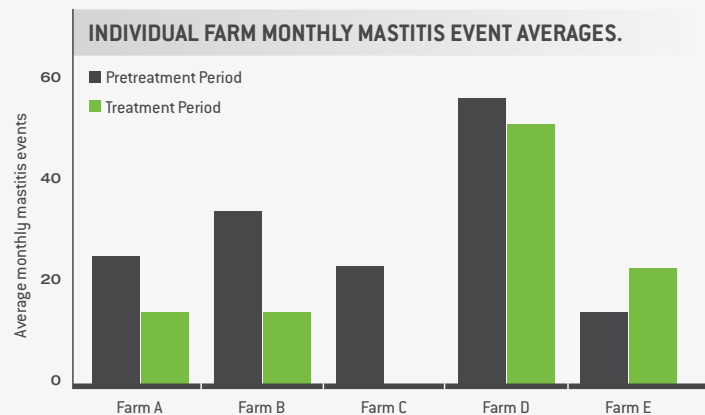
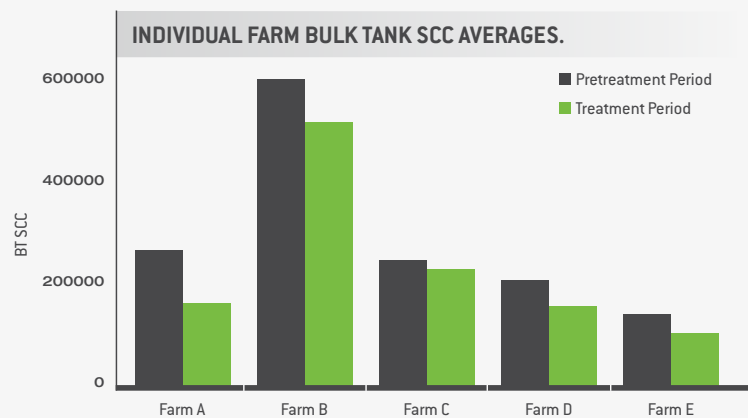
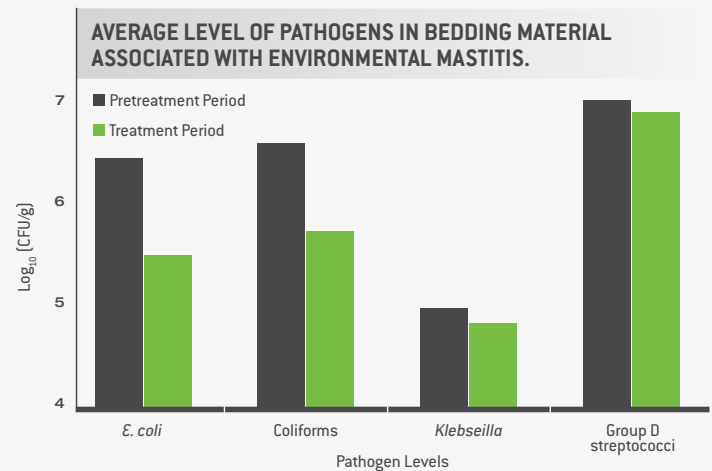
Provide a sustainable manure outlet without the safety risks of chemical bedding treatments

The proof is in the research.

There's a lot at stake—both positively and negatively—when considering bedding options for your dairy. CERTILLUS Eco Bedding has proven its efficacy in addressing some of the most common tradeoffs associated with the use of RMS dairy bedding.

For example, trials at five commercial dairies² indicate that CERTILLUS Eco Bedding effectively reduced pathogen levels within bedding material, as well as SCC and mastitis events.

- The average level of *E. coli*, coliforms, *Klebseilla* and Group D streptococci decreased with CERTILLUS Eco Bedding application.
- A decrease in SCC was observed at all five dairies, with an average SCC reduction of 56,800.
- Monthly mastitis events decreased on four of the five dairies using the CERTILLUS Eco application, with an average reduction of 9 events per month.





Targeted Microbial Solutions

Think of them as Microbes on a Mission.

CERTILLUS™ Eco Dairy Bedding is one of many CERTILLUS Targeted Microbial Solutions. Each #ScienceHearted application uses positive strains of *Bacillus* to get your most important jobs done right—everything from animal waste management to pH-lowering inoculants that lock in nutrients.



CERTILLUS PERFORM



A feed additive proven to help improve performance—through increased gut integrity and pathogen inhibition.



CERTILLUS ECO



A *Bacillus*-based solution that helps keep animal waste from threatening your farm's productivity and reputation.



CERTILLUS INOCULANTS



These microbes on a mission quickly convert carbohydrates in cereals and forages to lactic acid, lowering pH and locking in nutrients.



We're #ScienceHearted and we're here for you.

We're ever-curious farm kids turned nutritional innovators, microbial pioneers and food safety game changers. We use scientific research to unlock the power of nature to create products that focus on you, your animals and worldwide food security. To learn more about CERTILLUS™ Eco Bedding ask your ARM & HAMMER™ representative or visit AHfoodchain.com.

1 Rollin E, Dhuyvetter K, Overton MW. The cost of clinical mastitis in the first 30 days of lactation: An economic modeling tool. *Prev Vet Med* 2015 Dec 1;122(3):257-64.

2 ARM & HAMMER field trials. References available upon request.