



**Protect your productivity
with customized solutions to
fit your unique challenges.**



#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.

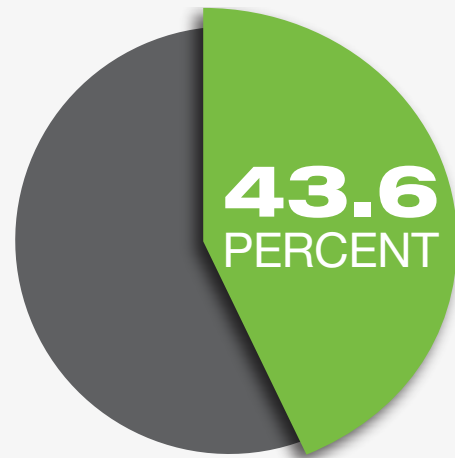
Subclinical diseases may be going undetected on your operation.

Across 6,500 samples from broilers and turkeys, 43.6% had subclinical levels of avian pathogenic *E. coli* (APEC).¹

Subclinical disease silently impacts performance.

In poultry, subclinical diseases like APEC cause:

- Greater variation in bird performance
- Lost bird potential



What if you could customize a product to your operation's unique microbial makeup?



BIRD HEALTH.

What if you could combat avian pathogenic *E. coli* (APEC) and *Clostridium perfringens* (CP) to reduce poor performance caused by subclinical disease?



CUSTOMIZED APPROACH.

What if you could develop a customized blend of *Bacillus* strains to combat your flock's specific challenges?



BOOST PROFIT.

What if you could optimize feed conversion and improve bird productivity?

ONLY
CERTILLUS Targeted
Microbial Solutions™
DELIVER A PRODUCT
UNIQUELY FORMULATED
TO YOUR **SPECIFIC CHALLENGES.**

It starts with understanding your Microbial Terroir.

Why your Microbial Terroir matters.

Your Microbial Terroir™ is the microbial makeup of your environment, your flock and litter. Only ARM & HAMMER™ can assess the positive and negative components of your Microbial Terroir and reveal what you need to combat harmful pathogens that slow down animal productivity.

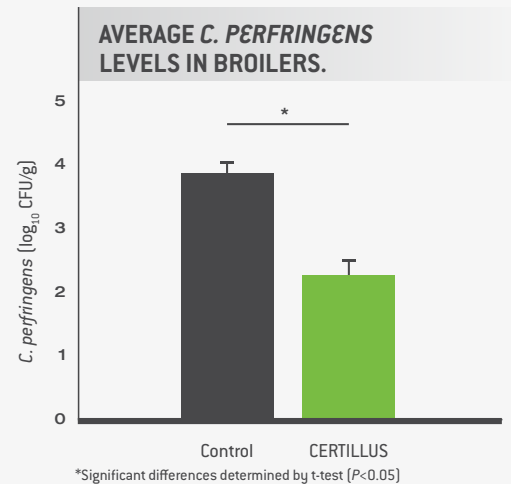
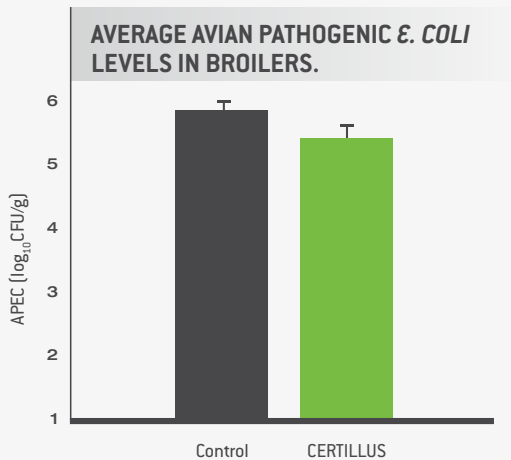


How CERTILLUS gives you the beauty of certainty:

CERTILLUS,™ a customized solution developed to fit your needs, uses proprietary strains of *Bacillus* to make the uncertain certain. By selecting the right *Bacillus* strains, you can help combat the specific challenges in your Microbial Terroir impacting your birds' performance.

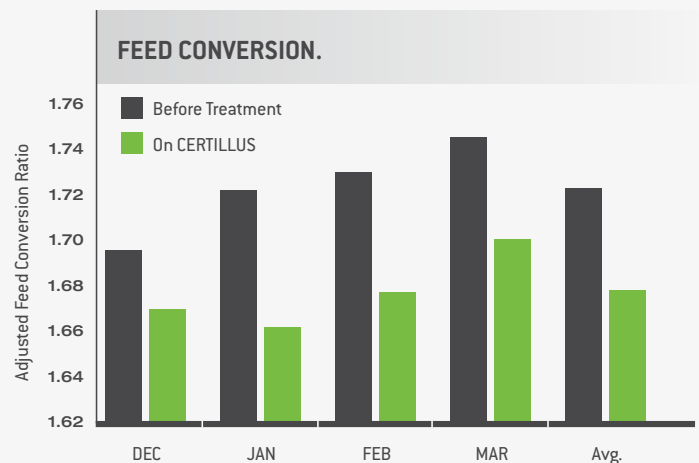
Change the microbial landscape.

An in-field study¹ measured pathogen levels over time from more than 2,000 broiler gastrointestinal tract samples. Feeding CERTILLUS effectively changed the microbial landscape to reduce the prevalence of avian pathogenic *E. coli* and *C. perfringens*.



Not all *Bacillus* strains are created equal.

In a four-month feed conversion study² versus another *Bacillus* product, CERTILLUS use resulted in improved feed conversion, broiler weight gain and lower instances of avian pathogenic *E. coli* and *C. perfringens*.



Comprehensive capabilities, effective solutions.

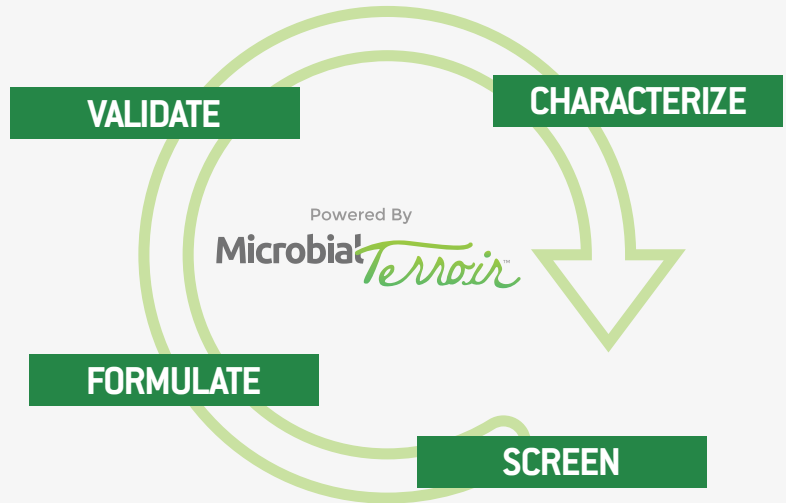
Only ARM & HAMMER™ uses your Microbial Terroir™ to reveal your unique challenges and develop a customized solution for your specific needs. The team of experts at our state-of-the-art lab specialize in developing powerful solutions tailored to combat your flock's challenges.

Our team will analyze and identify your unique microbial makeup, formulate a solution customized to your needs, and continually validate and reassess the environment to ensure your birds receive optimal protection against their ever-evolving microbial challenges.

Get started with your on-farm Microbial Terroir assessment.

Contact your ARM & HAMMER representative to identify your unique challenges and determine the Targeted Microbial Solutions™ that are right for your operation.

Microbial Terroir Program



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™ ask your nutritionist, veterinarian or ARM & HAMMER representative or visit AHfoodchain.com

1 Hutchison E, Anderson S, Vang E, Wujek R, Rehberger T. "Industry-wide survey of avian pathogenic *E. coli* in US broilers." Abstract #382P, presented at Poultry Science Association 2017 Annual Meeting, Orlando, FL.

2 Kangas R, Hutchison E, Anderson S, Vang E. Monitoring the efficacy of a *Bacillus* DFM on GI microbiota across time and product formulation. *Internal ABS Poultry Res Review* 2015;61:1-13.