



Reduce the effects of subclinical clostridial challenges

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Clostridia are everywhere, including poultry facilities across the world, and even in the gut environment of normal, healthy birds.

As you work to reduce this threat to flock health, it is important to understand that Clostridia live in the soil throughout the world and continually make their way into feedstuffs, causing various clinical and subclinical challenges to bird, and flock, health and efficiency. Further, necrotic enteritis-causing Clostridia are part of the normal digestive tract bacterial community. During gut integrity compromising events (such as with Coccidiosis) they proliferate to cause necrotic enteritis.

Unfortunately, it is not realistic to eliminate or prevent infection through quarantine, disinfection or sanitation. Additionally, oocysts – the thick-walled stage of the life cycle of coccidian parasites – are extremely resistant to common disinfectants, meaning it is not possible to completely sterilise a poultry facility. Yet, you must address the challenge posed by Clostridia and other disease-causing organisms that trigger clinical and subclinical problems. Researchers at the Animal Microecology Institute's College of Veterinary Medicine at the Sichuan Agricultural University in Chengdu, China, note that necrotic enteritis, especially subclinical necrotic enteritis, has become one of the most threatening problems in the poultry industry.

COSTLY DISEASE

US researchers estimate that subclinical necrotic enteritis is estimated to result in a 12% reduction in body weight and a 10.9% increase in feed conversion rate compared with healthy birds – resulting in an increased cost to producers ranging from about US\$370 to approximately US\$739 per flock.

A comprehensive sampling program on US poultry farms offers insight into microbial communities in those environments. This information shows levels of subclinical challenges that cut into profits even though you may not see clinical disease symptoms.

In the case of subclinical enteritis, chronic intestinal mucosal damage leads to production losses due to poor digestion and absorption, reduced weight gain and increased feed-conversion ratio. Generally, no overt clinical signs are present and usually there is no elevated mortality.

ARM & HAMMER laboratory results show a significant portion of the samples from seemingly healthy birds show levels of pathogens that lead to subclinical disease challenges.

INFLUENCE MICROBIAL TERROIR

The identification of these bacteria helps to identify which combination of Targeted Microbial Solutions™ – which feature proprietary *Bacillus* strains – would best inhibit the growth of these undesirable organisms in poultry complexes. This ultimately helps reduce gut population shifts that give rise to necrotic enteritis.

Bacillus strains are natural enemies of Clostridia; long-term use will result in a shift in the Clostridia species diversity over time. Ultimately, these solutions influence a facilities' Microbial Terroir™, the unique microbial make up of an individual poultry complex. US producers are learning that this change in pathogen diversity helps increase gut health and lower harmful bacterial loads in animal GI tracts, including Clostridia, which helps enhance flock health and efficiency.

References available on request

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