

# Build resilience ahead of challenges to prevent and protect.



At ARM & HAMMER<sup>™</sup> 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.

## In a global survey, 85% of cereal grains sampled were contaminated with at least one mycotoxin.<sup>1</sup>



The threat of mycotoxins also exists in silage. Ruminants are susceptible to the detrimental effects of mycotoxins in the diet, meaning that your herd's production and performance—and, ultimately, your profitability—could be taking a hit.

Ingested mycotoxins can damage the gut epithelial cell surface, compromising a cow's ability to block mycotoxins from entering its tissues and migrating to different organs.



## Only BG-MAX<sup>™</sup>:

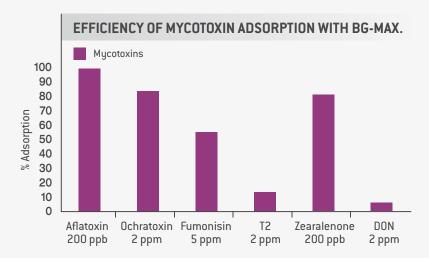
- Delivers the benefits of Refined Functional Carbohydrates™ (RFCs™) to help your cows take on mycotoxins and win, regardless of feed source
  - Is backed by research exhibiting the ability to block mycotoxins at the cellular level
  - Builds resilience ahead of challenges to help cows reach their production potential

### The proof is in the research.

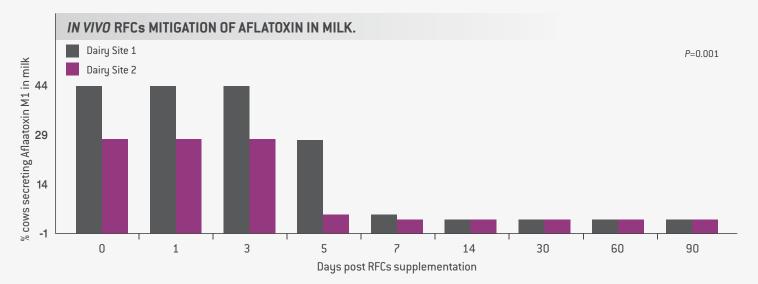
*In vitro* studies have demonstrated that RFCs can prevent cytotoxicity caused by a variety of mycotoxins, as well as forage extracts containing them.<sup>2,3</sup>

BG-MAX efficiently bound some of the most common mycotoxins.<sup>4</sup>

#### **EFFECTS OF TREATMENTS OF IPEC-J2 EPITHELIAL CELLS CYTOTOXICITY CAUSED BY MYCOTOXINS.<sup>3</sup>** Control 83 % Cytotoxicity 72 RFC, 0.05% 36 5 4 2 0 0 Ochratoxin Aflatoxin B1 None Fumonisin 100 PPM 100 PPM **50 PPM**



On two dairy sites RFC supplementation reduced carryover of aflatoxin in milk.<sup>5</sup>



#### **Recommended feeding rates**\*

HEIFERS	14 g/h/d/Dry	LACTATING DAIRY CATTLE	28 g/h/d	TRANSITION DAIRY CATTLE	56 g/h/d

\*Consult your nutritionist for your optimum feeding rates.



#### 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 BG-MAX<sup>™</sup> ask your nutritionist, veterinarian or ARM & HAMMER<sup>™</sup> representative or visit AHfoodchain.com.

- 1 Global Mycotoxin Occurrence in Feed: A Ten-year Survey. Toxins 2019;11:375.
- 2 Baines, et al. A prebiotic, CELMANAX, decreases *Escherichia coli* 0157:H7 colonization of bovine cells and feed-associated cytotoxicity *in vitro*. *BMC Research Notes* 2011;4:110.
- 3 Examining the anti-mycotoxic potential of RFCs against 3 different mycotoxins. ARM & HAMMER Final Report, RTI Laboratory, 2021.
- 4 ARM AND HAMMER S190641042 0.8% BG-MAX revised report. Data on file. 2019.

5 Baines D. Evaluation of prebiotics and probiotics to reduce toxicity of pure and mixed-feed mycotoxins *in vitro* and to prevent carry-over of aflatoxin B1 in dairy cows. Symposium on Gut Health in Production of Food Animals; Abstracts 202-1 and 202-2. 2014.