

# GBM Performant improves performance and gut health in broilers.



## Summary

- Diets with GBM Performant resulted in a significantly improved feed conversion ratio (FCR).
- Diets with GBM Performant resulted in a significantly improved intestinal lesion score.

## Objective

Butyric acid is a short-chain fatty acid. Its derivatives have been shown to improve growth performance, enhance gut development, suppress pathogenic bacteria growth, and balance gut microbiota in poultry. Necrotic enteritis (NE) is one of the most common diseases in poultry and can suppress growth, reduce nutrient digestion and absorption, cause gut inflammation, and alter microbial balance. Both clinical and subclinical NE will lead to compromised performance, poor welfare, and economic losses. The purpose of this study was to evaluate the effect of GBM Performant on the performance and intestinal lesion score of broilers under a necrotic enteritis challenge model.

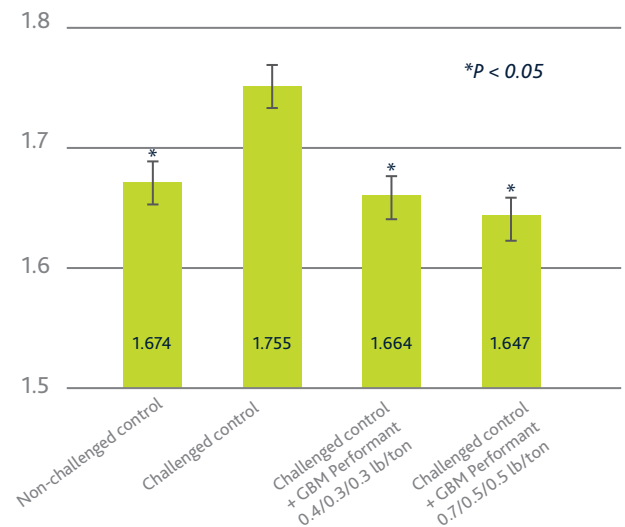
## Materials and methods

- GBM Performant is fat coated and a source of highly concentrated butyric acid (>63%).
- Non-medicated, commercial-type diets:
  - Starter phase: day 1–14, crumbles
  - Grower phase: day 14–28, pellets
  - Finisher phase: day 28–42, pellets
- One-day-old, off-sex Cobb 500 male broiler chicks (n = 2,000) were used, with 10 replicates per treatment and 50 birds per pen:
  - T1: non-challenged control
  - T2: challenged control
  - T3: challenged control + 0.4/0.3/0.3 lb/ton GBM Performant
  - T4: challenged control + 0.7/0.5/0.5 lb/ton GBM Performant
- Challenge model:
  - Day 14: Birds from T2, T3, and T4 were inoculated in feed with ~5,000 oocysts of *Eimeria maxima*
  - Day 19, 20, and 21: Birds from T2, T3, and T4 received 1 mL of 10<sup>8</sup>cfu/mL *Clostridium perfringens*

## Better FCR for the broilers receiving GBM Performant

The mortality adjusted FCR was significantly improved ( $P < 0.05$ ) for broilers supplemented with GBM Performant than the challenged control treatment on day 42 (Figure 1).

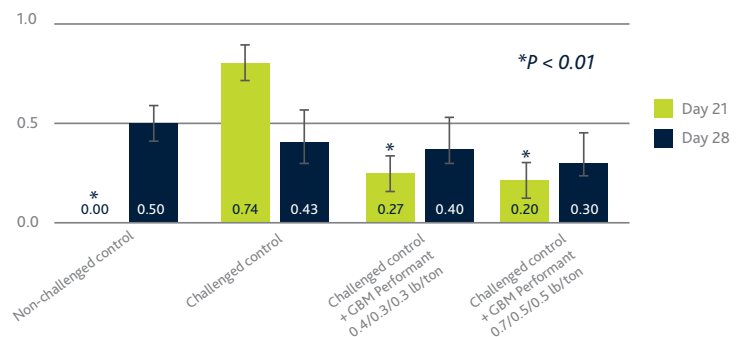
Figure 1. Mortality adjusted FCR from day 1–42



## Improved intestinal lesion score for the broilers receiving GBM Performant

The intestinal lesion scores were significantly lower ( $P < 0.01$ ) on day 21 for the broilers receiving GBM Performant supplemented diets than the challenged control (Figure 2). There was no significant difference in lesion scores among treatments seven days postinfection (day 28) when all birds had recovered from the challenge.

Figure 2. Intestinal lesion score on day 21 and day 28



## Conclusion

Adding GBM Performant to the feed resulted in a significantly improved FCR. Additionally, significant improvements in intestinal lesion scores were observed on day 21.



*Shipped as fine granules, GBM Performant demonstrated in this study that it could significantly improve the feed conversion ratio (FCR) and intestinal lesion score when added to the diet of broilers.*

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## Reach out to Eastman for more detailed information.

Detailed instructions and additional information are available from our expert Animal Nutrition team. Please contact us by emailing [animalnutrition@eastman.com](mailto:animalnutrition@eastman.com) or completing the form at [eastman.com/animalnutrition](http://eastman.com/animalnutrition). Thank you for your interest in Eastman and our animal nutrition products.

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