Anpario

Nature's Answer

THE EFFECT OF OREGO-STIM ON BROILER GUT HEALTH AND PERFORMANCE

SUMMARY

- Good gut cell turnover is essential to ensure optimum health and nutrient absorption.
- Broilers fed Orego-Stim had significantly higher gut cell turnover compared to control broilers.
- Previous trials have also shown that Orego-Stim improves feed conversion ratio in broilers by an average of 2.7 points.

BACKGROUND

- Cell turnover of enterocytes in the small intestine of broilers occurs every 2-4 days (Imondi and Bird 1966).
- Enterocytes are the specialised cells which line the villi of the small intestine and are responsible for nutrient absorption.
- PCNA (Proliferating Cell Nuclear Antigen) is an established marker for cell proliferation, which is a measure for enterocyte cell turnover (Uni *et al.,* 1998).
- Orego-Stim is a high quality eubiotic containing 100% natural oregano essential oil.

TRIAL DESIGN

An independent trial was conducted by Aristotle University of Thessaloniki, Greece, where 480 male Ross 308 chicks were reared from day old to 42 days old. Broilers were randomly allocated in equal numbers to either a Control or Orego-Stim (300g/t) treatment group with 8 replicates per treatment (30 broilers per pen). On day 42, broilers were processed and the duodenum, jejunum and ileum were analysed for enterocyte cell turnover using PCNA.

RESULTS

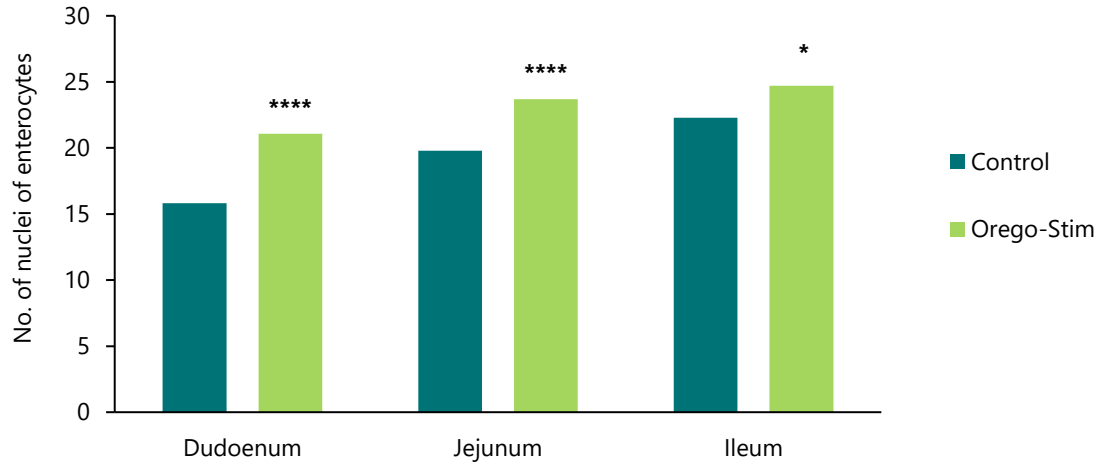

Figure 1. The effect of Orego-Stim on cell proliferation in the duodenum, jejunum and ileum of broilers at 42 days old. ****Significant difference $p<0.0001$. *Significant difference $p<0.05$.

- Orego-Stim in broiler diets significantly increased cell-turnover in all sections of the small intestine (Fig. 1).
- An increased rate of cell-turnover promotes healing and repair of the gut lining.
- This helps to support gut health and maintain tight junctions, thus promoting optimal nutrient absorption and minimal risk of pathogen invasion.
- Previous trials have shown that Orego-Stim improves broiler feed conversion ratios by an average of 2.7 points, most likely as a result of increased nutrient absorption due to a healthy gut.

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