study presented at ICPIH Manila

8th International Conference on Poultry Intestianal Health

smart blend of monoglycerides

to target gut health and immunity

OPTIGUT

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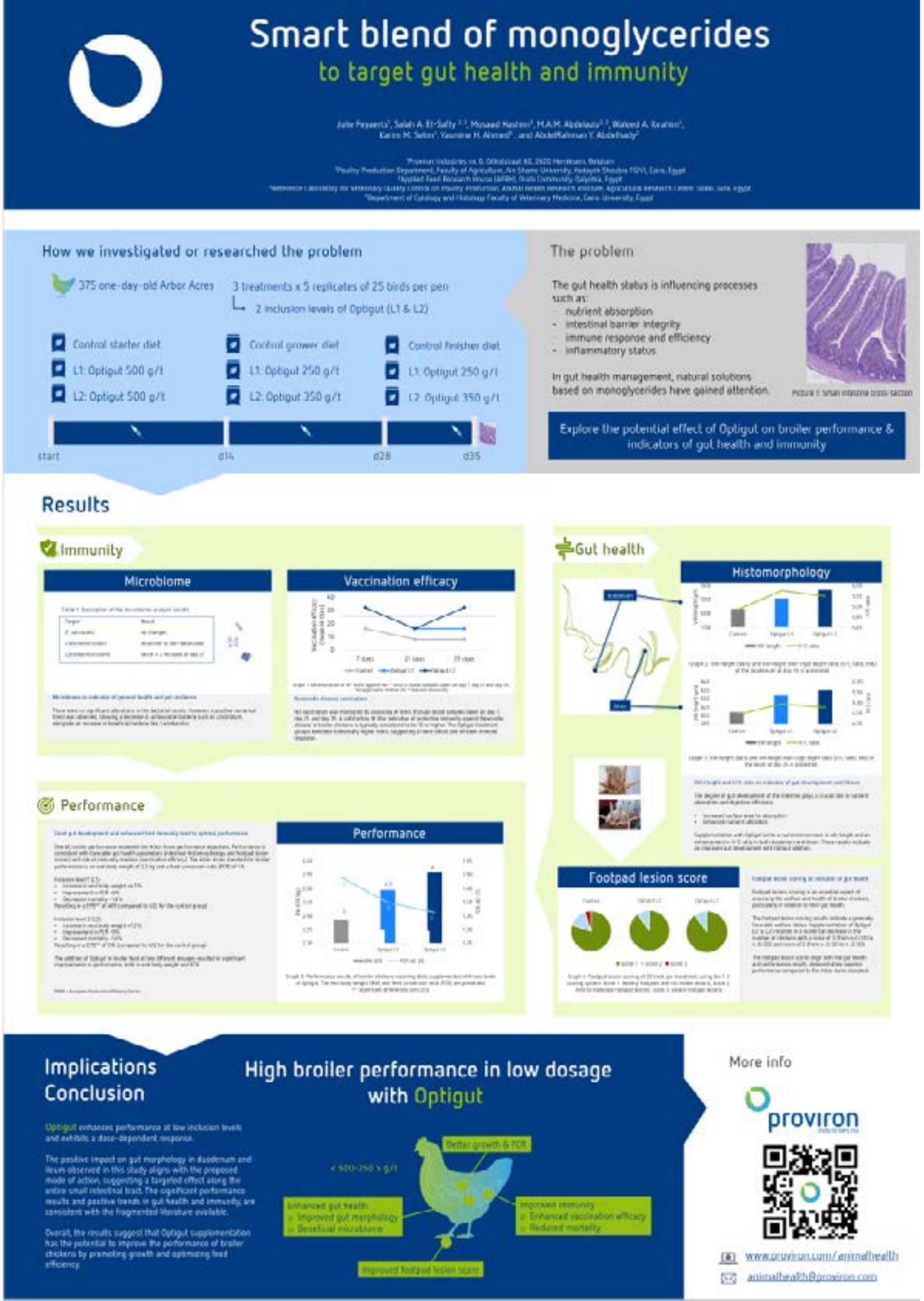

8th International Conference on Poultry Intestinal Health

Smart blend of monoglycerides to target gut health and immunity

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The Problem

The overall well-being and performance of broiler chickens is profoundly impacted by the status of their gut health, influencing processes such as nutrient absorption, the integrity of the intestinal barrie immune response and efficiency, as well as the inflammatory status. In gut health management, natur solutions based on monoglycerides have gained attention. This study aims to investigate the potential synergistic effects of a combination of monobutyrin and monolaurin on various indicators of gut health and immunity.

How we investigated or researched the problem

A comprehensive study was conducted to explore the impact of a monoglyceride blend on the performance, intestinal mucosal morphology, footpad lesion score, efficacy of Newcastle disease (NI vaccination, microbiome composition, and carcass characteristics of broiler chickens. The experimental design involved providing a dual mixture of monobutyrin and monolaurin to the birds through their feed at two different inclusion levels. A total of 375 one-day-old chicks were assigned t three treatments, with five replicates per treatment. The control diet was compared to diets L1 and L2 which were supplemented with an optimized monoglyceride blend (Optigut) at inclusion levels of 500-250-250 g/t and 500-350-350 g/t of feed in starter, grower, and finisher feeds, respectively.

Results

The results exhibited a dose-dependent improvement in both body weight and feed conversion ratio (FCR). At day 35, the end body weight was significantly increased 4.5% and 7.2% ($p<0.05$) for L1 and L2, respectively. The monoglyceride blend demonstrated a positive impact on villi height and the villi height to crypt depth ratio in both the duodenum and ileum. Additionally to gut morphology as a gut health indicator, there was a positive impact observed in footpad lesion scores. Vaccination efficacy displayed an upward numerical increase, birds receiving the monoglyceride blend showed increased antibody titers against Newcastle disease (factor > x2). There were no significant differenc in bacterial counts (*E. coli*, *Lactobacilli*, *Clostridia*) and carcass parameters.

Implications/ Conclusions

The positive impact on gut morphology in duodenum and ileum observed in this study aligns with the proposed mode of action, suggesting a targeted effect along the entire small intestinal tract. The significant performance results and positive trends in gut health and immunity, are consistent with the fragmented literature available. Underlining the potential benefits of the optimized monoglyceride blend (Optigut) in improving overall poultry health.

Optigut

optimising poultry gut

Optigut is a feed ingredient to increase gut health and reduce bacterial and necrotic enteritis in poultry (broiler, layer, breeder, turkey, minor species...). The technical performance of the animals improves (daily growth and feed conversion ratio), while the use of antibiotics decreases significantly.

Fatty acids have already found their way as antimicrobial agent in many applications such as mould control for feed preservation or acidification for gut health modulation. Also lipids – triglycerides of fatty acids – play an important role in newborns. Milk is not only a source of nutrients for the young animal. Milk lipids are a class of molecules that have broad-spectrum antimicrobial activity in addition to their nutritional value. The triglyceride core of the milk fat globule releases its antimicrobial activity in the gastrointestinal tract. Digestion products of milk triglycerides inactivate strains as diverse as E. coli, Salmonella, Campylobacter, Listeriaand Clostridium perfringens.

OPTIGUT is a proprietary blend of glycerides of short and medium chain fatty acids, specifically designed and tested to resolve the issues related to enteritis in poultry. The action of OPTIGUT relies on a double working mechanism, keeping a healthy balance in the gut.

A monolaurin component provides specific action against C. perfringens. This active helps controlling pro-

more info on proviron's Optigut

https://proviron.com/animalhealth