ActiveMOS

PREBIOTIC

With the restricted rules for the use of antibiotics in animal production worldwide, natural alternatives are being tested in order to maintain intestinal health and animal performance at all stages of poultry production.

Saccharomyces cerevisiae derivative products are extensively applied in animal nutrition with proven benefits.

ActiveMOS: Functional carbohydrates for intestinal health

Rich in mannan oligosaccharides (MOS), ActiveMOS contains fiber carbohydrates derived from a specially selected strain of *Saccharomyces cerevisiae* yeast.

It is ideal in the health program´s composition of poultry because:

1. Acts as a substrate for beneficial bacteria, promoting its growth in the intestinal mucosa
2. Has affinity for different Gram-negative bacteria, agglutinating these undesirable microorganisms and preventing its adhesion to intestinal mucosa
3. Balances intestinal microbiota maintaining the intestinal health
4. Enhances nutrient absorption
5. Supports gut defenses

Primary culture as a production process

Studies have shown that MOS efficiency is not directly dependent on the percentage of mannan present in the product, but essentially on its production process, which is essential to ensure adequate MOS exposure and functionality[1,2].

ActiveMOS is derivative from a yeast **primary culture**: a peculiarity of the primary culture process is the production of cells with higher **availability** of its compounds and higher **functionality**.

Benefits of the primary culture production process of ActiveMOS

A trial was conducted to evaluate the performance of different MOS sources. Chicks were orally given doses of MOS produced from Alcoholic Fermentation (MOS AF) and of ActiveMOS for 42 days. The inclusion rate was 1.5Kg MOS/MT (day 1-21), 1.0Kg MOS/MT (day 22-35) and 0.5Kg MOS/MT (day 36-42). On day 42 the birds were experimentally inoculated with a culture of *E. coli* containing 5x10^5 CFU of *E. coli*/mL. During the 10 consecutive days, feces were collected for *E. coli* count. On day 52 the level of specific anti-*E.coli* antibodies in blood was evaluated (Vetvicka, 2019).

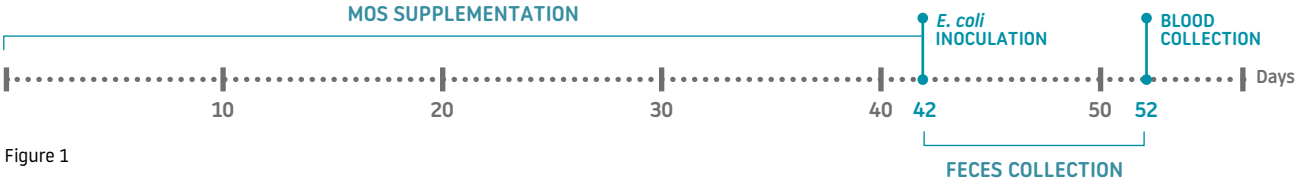


Figure 1

Superior results with ActiveMOS supplementation!

Higher reduction of *E. coli* in feces

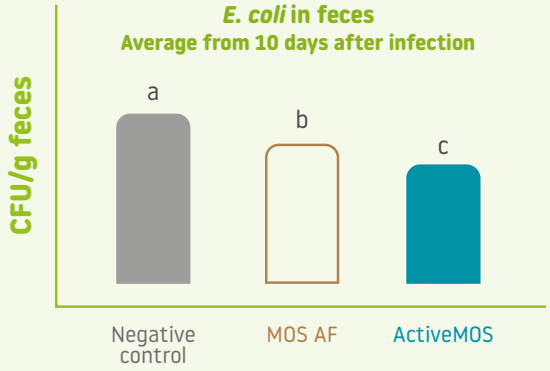


Figure 2: *E. coli* (CFU / g feces) average count considering 10 days of collection after experimental inoculation

Higher protection against *E. coli*

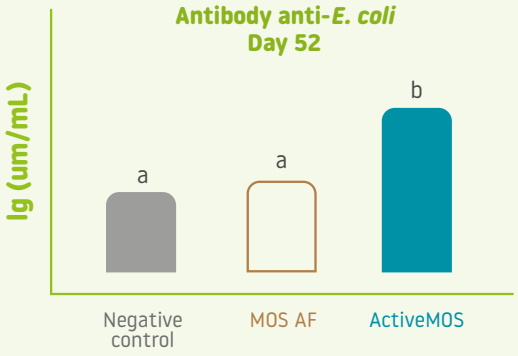
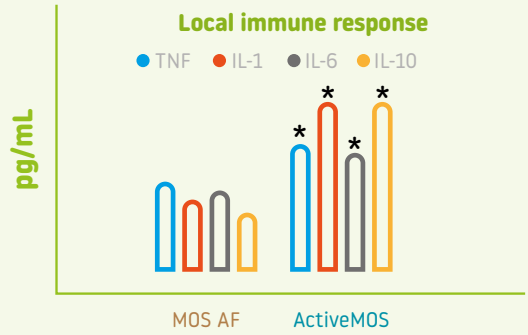


Figure 3: Specific anti-E.coli antibodies (µg/ml blood) – serum analysis by ELISA 10 days after experimental inoculation (day 52)

Higher local gut defense response



* Significant difference between groups (p<0.05)

Figure 4: Effect of MOS inclusion in the production of cytokines. Serum samples were proved for IL-1, IL-6, IL-10 y TNF alfa through commercial ELISA kits on day 42.

BROILERS SUPPLEMENTED WITH ACTIVEMOS:

- **Were more efficient to agglutinate *E. coli:*** reduced amount of the bacteria in the feces (Fig. 2)
- **Presented better protection response against *E. coli:*** higher level of specific antibody (Fig. 3)
- **Showed higher gut immune response:** increased cytokines production (Fig. 4)