

## OREGO-STIM AS A NATURAL ALTERNATIVE TO COCCIDIOSTATS

### SUMMARY

- ✓ Coccidiosis is an intestinal infection ubiquitous to poultry and is caused by several different species of *Eimeria*. Infection seriously impairs poultry growth and feed utilisation (Yun *et al.*, 2000). Reducing the severity of coccidiosis can enhance performance and improve profitability.
- ✓ In this study Orego-Stim® out-performed the positive control (challenged with no additives) and performed very close to the industry standard control, monensin sodium.
- ✓ Orego-Stim® can help to alleviate the impact of coccidiosis following an *Eimeria* challenge and can be used as part of natural management programmes.

### BACKGROUND

- ✓ This work is part of the Anpario's 4R approach (**Review, Reduce and Replace antimicrobials Responsibly**) which helps manage gut health and support healthier livestock through the use of natural products.
- ✓ Orego-Stim® is a high quality, eubioitic composed of 100% natural oregano oil, containing the active compounds, carvacrol and thymol, which have been shown to reduce stress response in animals.

### TRIAL DESIGN

An independent study was conducted at King Saud University, Saudi Arabia (Abudabos, 2019, Unpublished). The trial compares different natural coccidiostats and the industry standard control (monensin sodium) in the control of coccidiosis in challenged broilers. 392 Ross broilers (8 replicates of 7 birds each) were randomly allocated to 1 of 7 diets (Table 1) from 0 day old. At day 10, all birds except for the negative control, were individually challenged with Coccivac®, containing live oocysts (80 times overdose containing 8 broiler specific *Eimeria spp.*). Body weight gain (BWG), corrected feed conversion ratio (CFCR), corrected production efficiency factor (CPEF), intestinal lesion scores (using Johnson & Reid, 1970 method) and oocyte outputs were recorded for up to 30 days. Day 10-30 results are reported in this trial summary for brevity.

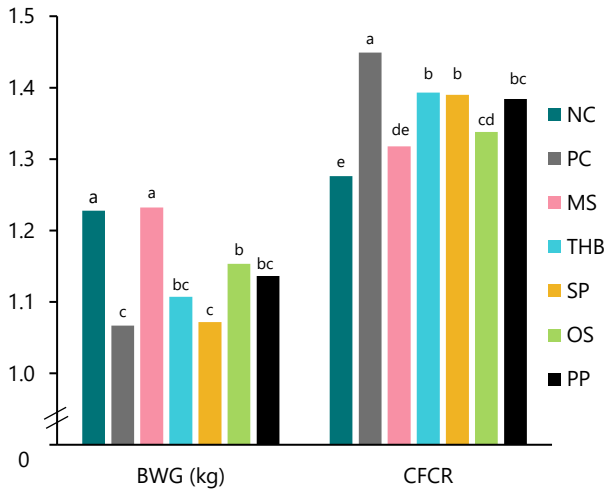
**Table 1. Dietary treatments**

Diet	Treatment per Tonne of Feed	Coccidiosis Challenge at Day 10
NC	Negative Control: No additives	No
PC	Positive Control: No additives	Yes
MS	Monensin sodium: 0.5kg	Yes
THB	Encapsulated 3, 4, 5 – Trihydroxybenzoic Acid (THB): 0.075kg	Yes
SP	Saponin rich extracts (Protodioscine, <i>Schidigera</i> ): 0.25kg	Yes
OS	<b>Orego-Stim: 0.3kg</b>	Yes
PP	Plant phytogetic additive: 0.3kg	Yes

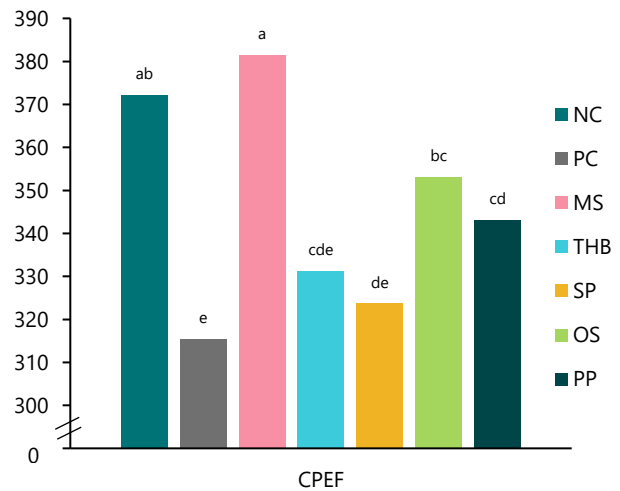




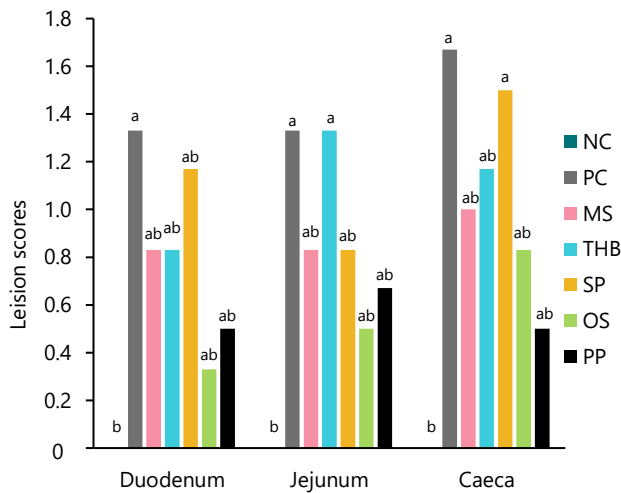
## RESULTS



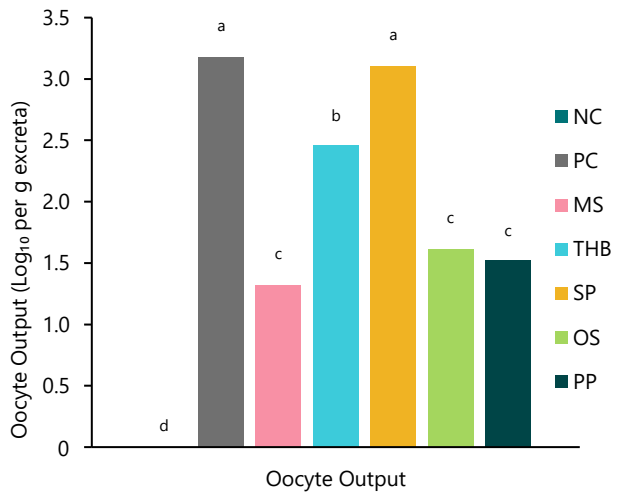
**Figure 1. Broiler performance at day 30 (20 days post challenge).** <sup>abcde</sup>Different superscripts differ significantly ( $p < 0.05$ ).



**Figure 2. Production efficiency at day 30 (20 days post challenge).** <sup>abcde</sup>Different superscripts differ significantly ( $p < 0.05$ ).



**Figure 3. Intestinal lesion scores at day 30 (20 days post challenge).** <sup>ab</sup>Different superscripts differ significantly ( $p < 0.05$ ).



**Figure 4. Eimeria oocyte output at day 30 (20 days post challenge).** <sup>abc</sup>Different superscripts differ significantly ( $p < 0.05$ ).

- ✓ Orego-Stim significantly improved overall body weight gain (Fig. 1) compared to the positive control and saponin diet.
- ✓ Orego-Stim also significantly reduced CFCR (Fig. 1) and improved CPEF (Fig. 2) compared to the positive control, trihydroxybenzoic acid diet and saponin diet.
- ✓ Intestinal lesion scores (Fig. 3) were reduced by Orego-Stim compared to the positive control, with the lowest score recorded in the duodenum and jejunum (excluding negative control). The lesion scores in the caeca of Orego-Stim fed broilers were lower than broilers fed the positive control diet and saponin diet.
- ✓ Oocyte output (Fig. 4) of broilers fed Orego-Stim was significantly reduced compared to the positive control, trihydroxybenzoic acid diet and saponin diet.
- ✓ The lesion scores and oocyte output of Orego-Stim fed broilers were not significantly different to those fed the industry standard control, monensin sodium.

