

**OREGO-STIM IMPROVES BROILER BREEDER SEMEN AND REPRODUCTIVE PERFORMANCE**

**SUMMARY**

- ✓ Enhanced reproductive performance is key to improving the profitability and sustainability of broiler breeder systems.
- ✓ Improvements to gut health can help to increase energy reserves available for reproductive processes whilst reducing stress on the animal, both of which may lead to improvements in fertility.
- ✓ In this study (Soliman et al, 2016) Orego-Stim improved cockerel and hen fertility, and subsequent hatchability, compared to control diets.

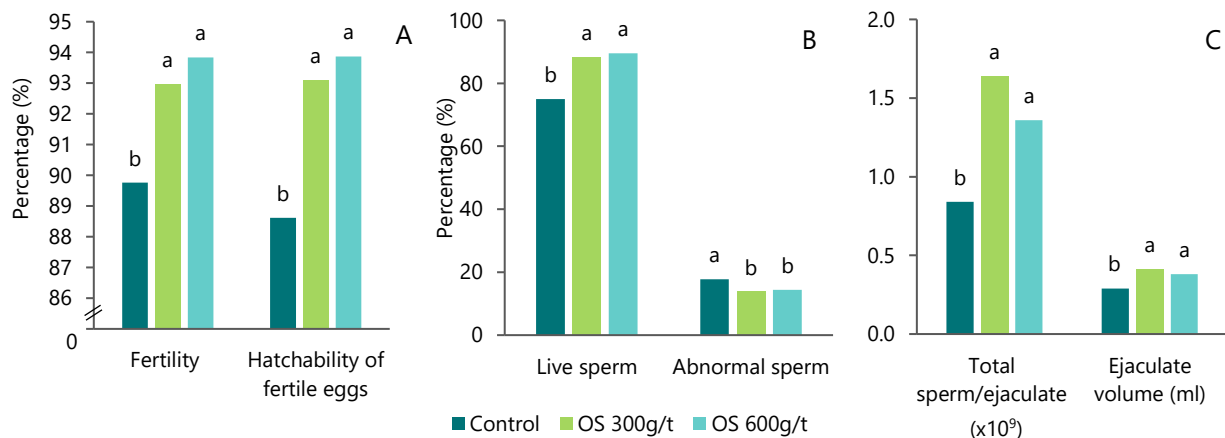
**BACKGROUND**

- ✓ This work was conducted to assess the efficacy of oregano essential oil on improving gut health, and the indirect effects on the reproductive performance of male and female broiler breeders.
- ✓ In the broiler industry even small improvements in broiler breeders after peak production (30 weeks) can greatly improve profitability.
- ✓ Orego-Stim is a high quality eubiotic composed of 100% natural oregano essential oil.

**TRIAL DESIGN**

An independent study was conducted at Inshas Poultry Breeding Station, Animal Production Research Institute (Egypt) to assess the effect of Orego-Stim (OS) on broiler breeder fertility. Ninety-nine (90 hens, and 9 cockerels) 24-week-old Inshas broiler breeders were randomly assigned to one of three dietary treatments including differing levels of Orego-Stim (Control, 0; OS 300g/t; or OS 600g/t) with three replicates (10 hens: 1 cockerel per replicate). Birds were fed until 40 weeks of age under the same environmental conditions with *ad libitum* feed and water. Intestinal (3 hens/replicate) and seminal samples were collected at 40 weeks-old, while eggs were collected from remaining hens after 40 weeks.

**RESULTS**



**Figure 1. Effect of Orego-Stim on broiler breeder fertility and hatchability (A), sperm quality (B, C).** <sup>ab</sup>Different superscripts denote significant difference ( $p \leq 0.05$ ). Adapted from Soliman et al., 2016, Egypt. Poul. Sci. 36:67.

- ✓ In 40-week-old hens (3/replicate), small intestine *E. coli* counts were significantly decreased while *Lactobacillus* counts were increased in birds fed Orego-Stim ( $p \leq 0.05$ ; data not shown).
- ✓ In hens fed Orego-Stim, fertility and hatchability of fertile eggs was significantly improved (Fig.1A).
- ✓ In cockerels fed Orego-Stim, the percentage of live sperm significantly increased and the percentage of abnormal sperm significantly decreased (Fig. 1B). Total sperm per ejaculate and ejaculate volume were also significantly improved (Fig.1C).

