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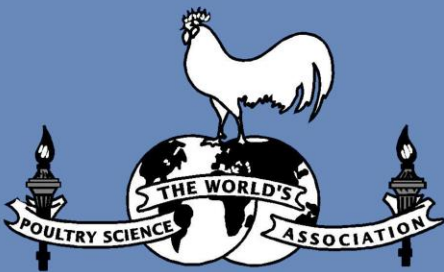
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**ASOCIACIÓN
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CIENCIA AVÍCOLA
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Book of

ABSTRACTS

Splitfeeding

La alimentación más eficiente y sostenible

que mejora la calidad de la cáscara

Con **Splitfeeding** conseguirá aproximar el consumo de nutrientes a las necesidades reales de las ponedoras en cada momento del día.

Splitfeeding es la innovación en la alimentación para ponedoras*

NANTA I+D+i =

- Economía: menor consumo de nutrientes
- Calidad de cáscara: calcio más eficiente
- Sostenibilidad: menor consumo y menos eliminación de N y P

*Desarrollado en el Centro de I+D de Avicultura de Nutreco



NANTA

*Alimentamos
crecimiento*

**7th Mediterranean Poultry Summit
Of the Mediterranean Poultry Network of the WPSA
Cordoba - Spain
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Effects of addition of *Saccharomyces cerevisiae boulardii* on multiple parameters on broiler health and productivity

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In this study we implemented field and laboratory investigations that consisted of two trials during the two broilers grow out periods. In the first trial we evaluated the effects of different doses of feed addition of *Saccharomyces cerevisiae boulardii* (SCB) on multiple parameters on broiler health and productivity. In the second trial we chose the most beneficial dose of SCB from the first trial and added it as such in feed or at 50% of it in water. The first trial was done on four groups of 50 chicks per group. Group 1 (G1) was control group, group 2 (G2) - 150 g/1000 kg, group 3 (G3) - 500 g/1000 kg and group 4 (G4) - 1000 g/1000 kg of SCB 1,5x10¹⁰ CFU/g. The second trial was done on three groups of 50 chicks per group. G1 - 500 g/1000 kg in feed, G2 - control group, and G3 - 250 g/1000 l in drinking water. In both trials, each group consisted of 25 chicks per replicate. Productivity data was assessed by weekly measurement of the body weight, and calculation of feed conversion rate (FCR) and European production efficiency factor (EPEF). Blood was collected at day 42 and hematology and biochemistry indices were measured from 20 birds per group. Identification and enumeration of *Salmonella* spp., *Campylobacter* spp., *Clostridium* spp., and Lactic acid bacteria (LAB) was done from the cecal and ileal content from four birds per group. After completion of the second trial, microbiome analysis of the fecal content was performed from four to five samples from each group. Quantitatively, the use of SCB increased the body weight of the broilers by 17% compared to the control group. The FCR and EPEF values indicate a statistically significant difference ($p < 0,05$) between the control group and the SCB treated groups. G3 had the best values for these two parameters. Albumins, total proteins, globulins, cholesterol, triglycerides, urea and calcium were significantly lower ($p < 0,05$) in G4 in comparison with G1 and G2. While ALT and AST were significantly higher ($p < 0,05$) in G3 and G4. Bacteriological analysis revealed absence of *Salmonella* spp. in all groups. There was a declining trend of the *Clostridium* spp. and number of LAB was higher in the G3 and G4 without statistical significance. In the second trial, the G1 had the lowest FCR (1.49) compared to G2 (1.64) and G3 (1.61) and the highest EPEF (448) compared to G2 (386) and G3 (423). The G3 had the highest final body weight (2861 g) compared to other groups. Considering the microbiome profiling data, the predominant fecal populations were Bacillaceae and Thermoactinomyces for G1, Bacillaceae, Thermobacillus and Brevibacillus for G2 and Bacillaceae, Thermoactinomyces and Rickenellaceae for G3. Unlike G1, two of the tested fecal samples revealed clostridial (in G2 and G3) and streptococcal communities (in G2). Feed supplementation with 500 g of SCB 1,5x10¹⁰ CFU/g /1000 kg improves broilers productivity, positively affects several of their metabolic processes and enhances their intestinal microbiota.

Keywords: feed additive; *Saccharomyces cerevisiae boulardii*; blood biochemistry, bacteriology, fecal microbiome