



WPC2016

THE XXV WORLD'S POULTRY CONGRESS

September 5-9, 2016
Beijing, China



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The Proceedings of XXV World's Poultry Congress 2016 — Abstracts



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Editors : Ning Yang, Ling Lian, Jiangxia Zheng,
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S1-0320 Emulsifier improves energy utilization in broiler chickens

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The objective of this study was to evaluate the effects of an emulsifier-additive on nutrient digestibility and nitrogen-corrected apparent metabolizable energy (AMEn) in broilers receiving diets with different soybean oil levels in the starter (14-21d) and finisher (35-42d) phases. Two trials were conducted using mash corn/soybean-based diets with or without inclusion (350g/ton) of emulsifier (Excential Energy Plus) and five levels of soybean oil (0; 1.5; 3.0; 4.5; 6.0%). A total of 960 male Cobb 500 in the starter and 360 male broilers in the finisher phase were allocated (metabolic cages) in a complete randomized design with 10 treatments and 6 reps each. Total excreta were collected from d 19 to 21 and from d 40 to 42 to determine AMEn, apparent digestibility coefficients for dry matter (ADCDM) and crude protein (ADCCP). Data were analyzed using ANOVA (PROC GLM/SAS) and CONTRAST test among treatments. In the starter phase, there was no effect ($P>0.05$) for ADCCP, but there were effects ($P<0.05$) of using emulsifier on ADCDM; treatments with 3.0 and 6.0% of oil had higher values (74.96 vs 72.91; 73.99 vs 72.19). AMEn was improved ($P<0.05$) by 61, 65 and 70 kcal/kg when emulsifier was used in the treatments with 3.0, 4.5 and 6.0% of soybean oil. In the finisher phase, there was no effect ($P>0.05$) for ADCCP. However, emulsifier increased ($P<0.05$) ADCDM in the treatments with 4.5 and 6.0% of oil (76.31 vs 74.14; 74.34 vs 72.38). The AMEn was improved ($P<0.05$) by 81, 87 and 99 kcal/kg when emulsifier was used in the treatments with 3.0; 4.5 and 6.0% of soybean oil. In conclusion, Excential Energy Plus can significantly improve AMEn when higher levels of oil are used in the diets.

Keywords: feed additive, broiler, nutrient digestibility, energy, emulsifier

S1-0321 Effect of protected sodium butyrate and nutrients concentration on broilers performance

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The study was conducted to compare the effect of sodium butyrate protected with sodium salt of palm fatty acids distillates (GUSTOR N'RGY) with diets differing in nutrient concentration on growth performance. A 2 x 2 factorial design was used with two basal diets based on corn and soybean meal: S (standard nutrient diet) and L (low nutrient diet) with a reduction of 60 Kcal/Kg of ME and 2.3% lower concentration of aminoacids; with or without addition of GUSTOR N'RGY at 1 kg/t (B, C). A total of 160 Cobb one-day-old chickens were randomly allocated to 4 treatments with 4 floor pens of 10 birds per treatment: SC (standard diet), SB (standard diet + protected butyrate), LC (low diet), LB (low diet + protected butyrate). Mash feeds and water were offered ad libitum. Performance was recorded at 0, 21 and 42d. Data were analyzed with two-way ANOVA using the GLM procedure of SAS. FCR was affected by nutrient concentration by 2.5% ($P<0.05$); it showed also a tendency in the 0-21d phase, being the lowest values for diets with standard energy level (1.39 vs 1.35). However, it did not affect any other parameters. Additive inclusion improved final BW and ADG (2.059 vs 2.205 kg, $P<0.05$) and ADG (48 vs 51 g, $P<0.05$). Furthermore, those differences were also observed in feed intake, where animals fed B diets ate 5g/d more than those fed C diets ($P<0.05$). As a consequence, there were no effects on FCR. Despite there were non-significant interaction between additive and nutrient concentration, a tendency ($P<0.10$) has been observed in feed intake at 21d being the lowest value for diet SC. It can be concluded that the addition of protected sodium butyrate improves performance (7% higher BW) in broilers. Besides, a 2.3% dilution of dietary nutrient concentration penalizes FCR in a 2.5%.

Keywords: protected sodium butyrate, energy, aminoacids