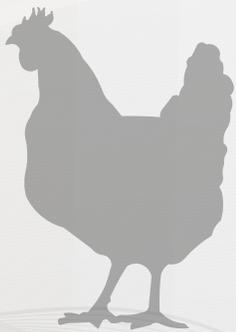


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ABSTRACTS
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SYMPOSIA AND ORAL SESSIONS

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mended level of CP (CP100) or 2% below the recommended level (CP98) were tested in the presence or absence of 0.2g/kg *B.subtilis* supplemented as Gallibro® (0.8x10⁹ cfu/g) in a 2 × 2 factorial arranged treatments in completely randomized design. Chicks were randomly assigned to four dietary groups with 6 replicates per treatment and 30 chicks per replicate. Basal diets of starter, grower, and finisher were formulated according to Hubbard's broiler manual. *B.subtilis* supplementation did not affect broiler growth performance. However, reducing dietary CP requirement decreased (P<0.05) body weight gain (BWG) and increased (P<0.05) feed conversion ratio (FCR). Fillet weight was higher (P<0.05) in *B.subtilis* supplemented groups with no differences recorded for other carcass characteristics parameters. Adding *B.subtilis* had no effect on the meat quality parameters. However, decreasing dietary CP reduced (P<0.05) meat water holding capacity. The gut morphology examination showed that *B.subtilis* had beneficial effect on jejunum morphology causing a significant increase in crypt depth during overall period. Also, ileal CP digestibility reported to be improved (P<0.05) by using *B.subtilis*. The results collected from this study do not have enough evidence to insinuate that *B.subtilis* supplementation can spare the decrease in dietary CP. However, it may be safe to conclude that the alteration in gastrointestinal morphological characters due to probiotic use was positively reflected on better CP ileal digestibility and the improved feed efficiency.

Key Words: *B. subtilis*, Broiler, Digestibility, Meat quality, Performance

P340 Field comparison of inclusion of two sources of protected butyric acid in broiler starter feeds Monica Puyalto¹, Miguel Colilla¹, Paolo Balzarini², Juan Mallo¹ ¹NOREL S.A.; ²ORSELL S.R.L.

Two field trials were used to compare the effect of two sources of butyric acid (sodium butyrate protected with sodium salt of PFAD (N'RGY) and ester of butyric acid with glycerol (MB)), on the starter phase performance of broiler chickens (Ross 708). In the first trial, 19,603 broilers were fed 28 days with a diet with 1.5 Kg of MB/t of feed and 20,000 animals with that diet, without MB but with 1 kg of N'RGY/t of feed. Males receiving N'RGY were heavier at day 28 than animals with MB (1708 g vs 1570 g). The females receiving the N'RGY had higher weight than MB group as well (1355 g vs 1350 g). FCR was 60 g better for N'RGY (1.84 vs 1.90). The MB group had a mortality of 1.18%, whilst N'RGY group had less mortality: 0.86%. The second trial compared the performance of 33000 broiler chickens, fed the diet with 1.5 Kg of MB/t of feed with 33125 animals fed the diet with 1 kg of N'RGY/t of feed. This trial lasted 21 days. Females in the N'RGY group had higher body weight at day 21 than animals with MB (916 g vs 866 g). The feed conversion ratio of the MB was 40 g worst than N'RGY: 1.84 vs 1.80. There were differences in mortality as well, the MB group had a mortality of 2.89% at the end of the trial, whilst N'RGY group had less mortality, 1.78%. It was concluded that the use of sodium butyrate protected with PFAD salts (N'RGY) on broiler feed allows higher growth, better FCR and less mortality than the use of MB in these broiler flocks in the starter period.

Key Words: sodium butyrate protected, ester butyric acid, glycerol

P341 Effects of Lysophospholipids product (LIPIDOL™) supplementation to low-protein amino acid diets on growth performance, nutrient digestibility, blood profiles, and carcass traits in broilers Byoungyun Jung¹, Waewaree Boontiam², Lin Hu Fang², Han Bit Yoo², Yoo Yong Kim² ¹EASY BIO, Inc.; ²Seoul National University

The experiment was conducted to evaluate the effects of lysophospholipids product (LIPIDOL™) supplementation to low-protein amino acid (AA) diets on growth performance, nutrient digestibility, blood profiles and carcass traits of broilers. A total of 300 male (Ross308®) day-old chicks were allotted to 1 of 5 dietary treatments with 6 replicates in a randomized complete block design. The positive control (T1) was calculated amount of lysine, methionine, and threonine met the recommendation by Ross 308® standard, negative control (T2) was 5% less of crude protein and major AAs than positive control (T1). T3, T4, and T5 diets were added with

0.05, 0.10 and 0.15% of LIPIDOL™ into the diet T2, respectively. Body weight and weight gain were increased linearly as dietary LIPIDOL™ supplementation level increased in grower, finisher, and overall periods (p<0.05). Feed conversion ratio (FCR) was also improved linearly in finisher and overall periods (p<0.05). Birds fed with 0.15% LIPIDOL™ had greater growth performance and FCR than birds fed negative control and 0.05% LIPIDOL™ (p<0.05). Dietary supplementation of LIPIDOL™ also showed positive effect on digestibility of crude protein and ether extract (linear effects, p<0.05), whereas dry matter and ash digestibility had no effect by dietary treatments. The relative weights of breast muscle, abdominal fat, spleen, liver and bursa of Fabricius were not affected among treatments. However, thigh muscle was increased with the response of 0.15% LIPIDOL™ inclusion (quadratic effect, p<0.05). No significant differences were observed in total cholesterol and their fractions among treatments. Glucose concentration was affected by inclusion level 0.15% LIPIDOL™ as compared to 0.05% of LIPIDOL™ addition (p<0.05). Blood urea nitrogen decreased when lower nitrogenous diets were provided to birds as compared to optimal AA requirements (p<0.05). Consequently, LIPIDOL™ could be considered as a feed additive into the reduction of 5% crude protein and AA diets without any detrimental effects on growth performance, immune organ weights and hepatic function with the improvement of nutrient digestibility.

Key Words: Low-protein and amino acids, lysophospholipids, LIPIDOL™, Performance, broilers

P342 Effect of Lysophospholipids product (LIPIDOL™) supplementation on growth performance, nutrient digestibility, blood profiles, and carcass traits in broiler chickens Young Hyun¹, Yoon Kyung Hyun¹, Waewaree Boonitiam², Yoo Yong Kim², Byoungyun Jung¹ ¹EASY BIO, Inc.; ²Seoul National University

The study was conducted to evaluate the effects of Lysophospholipids product (LIPIDOL™) supplementation to low-energy diet on growth performance, nutrient digestibility, blood profiles, and carcass traits in broiler chickens. A total of 300 male (Ross308®) day-old broilers, with an average initial body weight of 47.0 ± 1.20 g were randomly divided into 1 of 5 treatments in a randomized complete block design and 6 replicates with 10 birds per pen. Dietary treatments were consisted of 5 diets; 1) positive control (PC; T1) having 3,025 (starter period), 3,150 (grower period), and 3,200 kcal/kg (finisher period) of ME for Ross308® energy requirement; 2) negative control (NC; T2) having 2,875, 3,000 and 3,050 kcal/kg of ME which is 150 kcal/kg lower than PC; 3) T3: NC + Lipidol™ 0.05%; 4) T4: NC + Lipidol™ 0.10%; 5) T5: NC + Lipidol™ 0.15%. Results revealed that the birds fed with Lipidol™ showed heavier body weight (BW) and body weight gain (BWG) and better feed conversion ratio (FCR) during grower and finisher periods than that of birds in NC (P<0.01). This experiment showed linear and quadratic responses to LIPIDOL™ supplementation during grower, finisher and overall periods regardless of BW, BWG, FI and FCR (P<0.01), whereas BWG and FCR had a quadratic response (P<0.05) during a finishing phase. Conversely, FCR was improved as dietary LIPIDOL™ increased at the starter period, resulting in the linear response (P<0.05). Feeding of 0.15% LIPIDOL™ had a positive effect on ash digestibility compared with NC in the linear and quadratic responses (P<0.01 and P<0.05, respectively). There was the quadratic response of glucose level in blood (P<0.01) with increasing LIPIDOL™ level. Furthermore, the broilers fed diet containing 0.10% LIPIDOL™ was greater high density lipoprotein than that of in PC group (P<0.05). Consequently, it is considered that dietary LIPIDOL™ at the proper levels (0.10 and 0.15%) can be provided to low energy diet (-150kcal/kg) in order to improve growth performance, feed efficiency, carcass compositions, and fat digestibility without any detrimental effects on lymphoid organ weights and hepatic enzyme of broiler chicken.

Key Words: Lysophospholipids, LIPIDOL, Low Energy, Growth Performance, Broiler