



ASPA 24th Congress Book of Abstract

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ASPA 24th Congress

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from each other. Besides improved farming performance, treatments PBM and PBM + HM also resulted in improved indicators of sustainability (FIFO; ECR) which make PAPs from rendered poultry by product and insect larvae meals very attractive ingredients for a next generation of aquafeeds.

P076

Utilization of solvent extracted cardoon meal in the diet of lactating Sarda dairy ewes

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The aim of the study was to compare the effects of two different doses of solvent extracted cardoon meal (21.9% CP, 72.3% NDF, fat 1.02%, DM basis) included in the diet of Sarda ewes during their mid-lactation.

After 21 d of adaptation, 36 ewes were divided into 3 groups of 12 ewes each, balanced for body weight (kg 44.06 ± 5.15), body condition score (BCS 2.68 ± 0.10) and milk production (kg 1.83 ± 0.33). For 28 days, during the experimental phase, a group (control group; Con) received a diet consisting of a total mixed ration (TMR), dehydrated ryegrass and soybean meal. For the other two groups, the experimental diets the TMR was given in the same proportion of the control group but part of the soybean meal and the dehydrated ryegrass were replaced by cardoon meal in two different doses: low (250 g/d per head as fed; group LC) and high (550 g/d per head as fed; group HC). The substitution aimed to keep the diets iso-proteic and iso-fibrous (17.3% CP, and 37.3% NDF, on a DM basis). The ration was supplied 4 times a day. The results were analyzed by a linear mixed model, with diet, time and their interaction as fixed effects and ewes a random effect.

Body weight and BCS were not significantly affected by treatments. The group feed intake was similar among treatments (1.909, 1.983, 1.963 kg/d of DM for Con, LC and HC, respectively). Dry matter intake increased during the experimental period in all groups. The feeding treatments did not affect milk yield (1.62, 1.62, 1.65 kg/d for Con, LC and HC, respectively; SEM 0.069 kg), milk fat content (5.84%, 5.80%, 5.61% for Con, LC and HC, respectively; SEM 0.48%), milk protein content (5.14%, 5.52%, 5.22% for Con, LC and HC, respectively; SEM 0.14%), milk lactose, and milk fatty acids. Time had a significant effect on all these variables ($p < .001$).

In conclusion, cardoon meal was introduced in the diet of ewes without negative effects on intake, milk production and milk quality and body reserve variations.

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P077

Effects of calcium laurate on broiler growth performance and antioxidant intestinal activity

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Reducing the use of antibiotics is one of the largest challenges for animal production. The scientific community has investigated numerous alternative substances to antibiotics, including medium chain fatty acids, due to their antimicrobial and protective effects on gut health. The way of administration represents a critical point since free fatty acids dissociates in the stomach and are partially adsorbed and metabolized in the proximal gastro-intestinal tract, reducing their effects along the distal intestinal part. The present study investigates the effect of lauric acid saponified with calcium on the growth performance and intestinal antioxidant status in broiler chicks. A total of 720 female Ross308 chicks were assigned to one of three dietary treatments: CTR (basal diet alone), T1 (basal diet and lauric acid, 1 g/kg) and T2 (basal diet and lauric acid saponified with calcium (C12-Ca), 1 g/kg) considering Starter (0–11 d), Grower (12–21 d) and Finisher (22–42 d) basal diet. Body weight (BW), average daily gain (ADG), and average daily feed intake (ADFI) were measured and feed conversion ratio (FCR) was calculated. Chicks were slaughtered at 42d and intestinal samples were collected by scraping off the duodenal mucosa using a sterile glass microscope slide and used to investigate the impact of C12-Ca soaps on intestinal antioxidant status (superoxide dismutase SOD, catalase CAT and total antioxidant capacity TAOC). C12-Ca significantly ameliorated ($p < .05$) FCR during the starter period (0–11d) compared to lauric acid while no differences were found on BW, ADG and ADFI. SOD and CAT activities at intestinal level were significantly ($p < .05$) higher in chicks treated with C12-Ca. Our findings suggest that C12-Ca may not completely dissociates in the stomach and modulates the gut antioxidant status.