
1351 (W169) Acceptance and palatability of different inclusion levels of protein solutions by feed restricted and non-restricted nursery pigs.

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The aim of the present work was to study the productive performance of nursery pigs when sweet milk whey (SMW) is replaced by porcine digestive peptides (PDP; 620 g/kg of CP, Bioibérica SA, Palafolls, Barcelona, Spain). A total of 240 pigs were randomly distributed after weaning into two groups (12 pens/group) depending on the presence of SMW or PDP on their diets. The SMW group was fed a pre-starter (0 to 14 d) and starter (15 to 33 d) diet with 142 g/kg and 49 g/kg SMW respectively; the PDP group was offered an iso-caloric and iso-proteic diet with 20 g/kg of PDP and 300 g/kg of wheat replacing dairy products. Feed intake and body weight were measured weekly to calculate average daily feed intake (ADFI), average daily gain (ADG) and gain: feed ratio (GFR). A choice test and one-feeder test of 30 min each were performed in another group of animals 3 wk weaning (36 pen pairs) to evaluate the preference and acceptance for both diets, respectively. Feed intake was recorded by measuring the initial and final weight of the feeders. SMW and PDP diet positions were balance across pig's pairs. Data were analyzed with ANOVA using the GLM procedure (performance values) or the PROC MIXED (preference and acceptance values) of the statistical package SAS. Despite clear differences on feed preference (211 vs. 77 g; $P = 0.039$) and acceptance (287 vs. 192 g; $P = 0.001$) between diets with or without whey respectively, no effects were observed on performance at the end of the nursery period (20.92 vs. 21.13 kg for BW, 0.62 vs. 0.63 kg/d for ADFI and 0.52 vs. 0.53 kg/d for ADG). Despite the reduced preferences and acceptance observed, the use of dairy products appears to be unnecessary if a high valuable protein source is offered during nursery.

Key Words: familiarity, feed preferences, lactose

1352 (W170) Nutritional value of whey permeate and egg products fed to growing pigs.

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Inedible eggs from egg-breaking plants have high AA and fat content. Instead whey permeate (WP), co-product from dairy industry, has high lactose content. Thus, blends of eggs and WP can be good sources of protein and energy in swine diets; however, their nutritional value is unknown. A study was conducted to determine standardized ileal digestibility (SID) of AA and calculated NE value for dried whole egg (egg), and two blends of WP and egg (70% WP and 30% egg, 7030PE; and 60% WP and 40% egg, 6040PE). Eight ileal-cannulated barrows (35.1 kg BW) were fed four diets in a replicated 4 × 4 Latin square design. The diets were a pre-grower-corn-starch-based basal diet, and this basal diet with energy- and AA-yielding ingredients replaced with 30% of egg, or 40% of 7030PE or 6040PE. Energy and nutrient digestibility in the test products was determined by difference method. The SID of AA were calculated using published values for basal ileal endogenous AA losses. On DM basis, egg, 7030PE, and 6040PE contained 48.9, 18.6, and 21.4% CP; 3.60, 0.98, and 1.17% Lys; and 39.3, 8.89, and 12.4% ether extract, respectively. The SID of Lys was greater ($P < 0.05$) for egg (86.9%) than for 7030PE (73.6%) or 6040PE (70.8%). However, egg had lower ($P < 0.05$) SID of Arg, Ile, and Phe than 7030PE or 6040PE. The 7030PE and 6040PE were similar in apparent total tract GE digestibility and SID of all AA except His. The NE (on DM basis) for egg (4.67 Mcal/kg) was greater ($P < 0.05$) than that for 7030PE (3.34 Mcal/kg), which was lower ($P < 0.05$) than that of 6040PE (3.61 Mcal/kg). In conclusion, the proportion of egg (30 vs. 40%) in the egg-WP blend did not affect the digestibility of GE and of most AA; however, the NE value was greater for the blend with 40% egg due to the high fat content in egg. Egg-WP blends had lower Lys digestibility than egg, implying that Lys was partly damaged by the blending and drying process. Nonetheless, the egg-WP blends had high AA digestibility and NE values, and hence they can be good sources of AA and energy in swine diets.

Key Words: egg, whey permeate, pig