PSXVI-9 Evaluation of Dehydrated Restaurant Food Waste and Treated Rice Straw on Growing and Finishing Pigs. Medhat A. Michael1, Egyptian Ministry of Agriculture

Abstract: This project was undertaken to evaluate dehydrated restaurant food waste (DFW) mixed with treated rice straw (TRS) on growth, diet digestibility, and meat quality for growing and finishing pigs. The DFW was minced, dried, and mixed without or with TRS at 10% [DFW+TRS1] or 15% [DFW+TRS2], compared with a corn/soybean meal (CSM) as a control diet. The DFW, DFW+TRS1 and DFW+TRS2 products contained 11.4, 9.8 and 8.4% moisture, 18.0, 16.7 and 15.8% CP, 14.8, 11.7 and 9.3% crude fat, 4.8, 6.7 and 7.3% crude fiber, 0.58 and 0.50% lysine, 0.34, 0.68 and 0.78% Ca, respectively. The experiment used 72 pigs and four diets. In the growing phase, pigs fed a DFW+TRS1 diet gained faster (P < .05) than pigs fed CSM or DFW alone (0.65 kg/d, vs 0.59 and 0.46 kg/d, respectively). In the finishing phase, DFW+TRS2 resulted in ADG that did not differ from those of pigs fed the CSM diet (0.90 vs 0.99 kg/d; P > .05). The average gain: feed was similar for the pigs fed diets DFW+TRS1 or DFW+TRS2 (P > .05). However, CP digestibility was not different (P < .05) in the DFW+TRS2 compared with pigs fed the CSM diet (88.2 vs 85.3%). Carcass fat became softer (P < .05) with pigs fed diets containing DFW+TRS1 or 2. The meat quality from DFW+TRS1 or 2 pigs is acceptable and the overall flavor is comparable with CSM pigs (P > .05). These results indicate that DFW has the potential to produce a nutritious feedstuffs for pigs while offering a viable solid waste disposal option.

Keywords: agricultural byproducts, food wastes, pigs

PSXVI-14 Hindgut Disappearance of Phosphorus in Corn-Soybean Meal-Based Diets with or without Inorganic Phosphorus Sources in Twenty-Four-kg Pigs. Jongkeon Kim1, Beob Gyun G. Kim1, Konkuk University

Abstract: The objective was to investigate the hindgut disappearance of phosphorus (P) in corn-soybean meal-based diets with or without inorganic P sources in pigs. Hindgut disappearance of P was hypothesized to be greater in a diet without inorganic P than in a diet with inorganic P. Barrows (n = 5; initial body weight = 23.5 ± 3.1 kg and final body weight = 33.7 ± 5.5 kg) fitted with a T-cannula in the distal ileum were individually housed in pens equipped with a feeder and a nipple drinker. Two corn-soybean meal-based diets were formulated with or without the inclusion of inorganic P. No phytase was supplemented to the diets. All diets contained 0.5% chromic oxide as an indigestible index. The pigs were allotted to a 2-period crossover design with 2 diets. A diet was fed to 2 pigs and the other diet was fed to 3 pigs in each period. An additional period was conducted after the 2 periods to obtain 2 additional replicates for each treatment. Each period consisted of a 7-d adaptation period, a 2-d fecal collection period, and a 2-d ileal collection period. Apparent ileal (54.7 vs. 35.0%) and total tract (53.7 vs. 34.3%) P digestibility values in the inorganic P-containing diet were greater (P < 0.01) than those in the diet without inorganic P. However, apparent ileal P digestibility values were comparable (P > 0.90) with apparent total tract P digestibility values irrespective of the inclusion of inorganic P in the diets, and thus, a significant amount of hindgut disappearance of P was not observed in both diets. In conclusion, hindgut disappearance of P in a corn-soybean meal-based diet was negligible in 23-kg growing pigs regardless of the inclusion of inorganic P sources.

Keywords: growing pigs, hindgut disappearance, phosphorus