

LOW OLIGOSACCHARIDE SOYBEAN MEAL IN DIETS OF EARLY WEANED PIGS

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An experiment was conducted to determine the effect of low oligosaccharide soybean meal (LOSBM) on growth performance, blood urea nitrogen and intestinal morphology in early weaned pigs. One hundred and twenty eight 18-d old pigs (6.0 ± 0.12 kg BW) were assigned randomly to one of four dietary treatments in a 28 - d nursery study. Diets were a corn-SBM control diet supplemented with fish meal, whey powder and spray dried porcine plasma (Diet 1); 50% SBM in Diet 1 was replaced by LOSBM (Diet 2); 100% SBM in Diet 1 was replaced by LOSBM (Diet 3) ; and LOSBM replacing all SBM in Diet 1 and without supplementation of fish meal, whey powder and spray dried porcine plasma (Diet 4). Diets were fed in three phases (phase 1=7 d; phase 2= 14 d; phase 3 =7 d). Blood samples were collected via vena puncture on d 0, 7, 14 and 28 of the study period for blood urea nitrogen analysis. Six pigs per dietary treatment were harvested and intestinal morphology and intestinal content viscosity were determined at 25%, 50% and 75% along the gastrointestinal tract on d 28 of the study. A summary of the overall results is presented in Table 1.

Table 1. Effect of low oligosaccharide soybean meal on performance of early weaned pigs

Criteria	Diet 1	Diet 2	Diet 3	Diet 4	PSE	P-value
Start Wt (kg)	6.0	6.0	6.0	6.0	0.12	0.99
End Wt (kg)	17.5	18.3	17.5	16.8	0.27	0.12
ADFI (kg)	0.51	0.56	0.53	0.50	0.02	0.29
ADG (kg)	0.36	0.39	0.36	0.34	0.01	0.14
G:F (kg/kg)	0.73	0.73	0.73	0.73	0.02	0.12
BUN (mg/dl)	10.7 ^a	11.8 ^{ab}	14.7 ^b	13.1 ^{ab}	0.85	0.05

^{a-b} Means within a row with different superscript differ ($P < 0.05$)

Replacement of conventional SBM with low oligosaccharide soybean meal diets without fish meal, whey powder and spray dried porcine plasma did not influence the growth performance of early weaned pigs. However, pigs fed LOSBM with fish meal, whey powder and spray dried porcine plasma had high levels of BUN compared to pigs fed SBM.