

**P043 Amino acid digestibility by growing pigs in distillers dried grains with solubles with conventional, medium, or low concentrations of fat.** S. Curry\*, D. Navarro, F. Almeida, H. Stein, *Animal Science, University of Illinois, Urbana.*

The objective of this experiment was to determine the standardized ileal digestibility of AA in 3 sources of DDGS with different concentrations of fat. Twelve growing barrows (initial BW: 76.1 ± 6.2 kg) were randomly allotted to a replicated 6 × 4 Youden square design with 6 diets and 4 periods. Three diets contained 60% DDGS with conventional (9.9%), medium (8.1%), or low (6.6%) concentrations of fat were formulated and contained 5.9, 4.9, and 4.0% fat, respectively. Two additional diets containing the low or the medium fat DDGS were also formulated, but corn oil was added to these diets to bring the concentration of fat in the diets to the same level as in the diet with the conventional DDGS (i.e., 5.9%). A N-free diet was also formulated to measure endogenous losses of AA in the pigs. Pigs were fed experimental diets for four 7-d periods and ileal digesta were collected on d 6 and 7 of each period. The standardized ileal digestibility (**SID**) of CP and all indispensable AA, except Trp, was greater ( $P < 0.01$ ) in conventional DDGS than in the medium fat and low fat DDGS (Table 1). Adding oil to the diets containing the medium fat and low fat DDGS did not consistently increase the SID of AA. In conclusion, conventional DDGS has greater SID values for most AA compared with medium fat and low fat DDGS and addition of oil to diets containing medium fat or low fat DDGS does not ameliorate this reduction. (See table on the next page.)

**Table 1.** Standardized ileal digestibility of amino acids (%) in DDGS with conventional (9.9%), medium (8.1%), or low (6.6%) concentration of fat

Item	DDGS source					SEM	P-value
	Conventional	Medium fat	Low fat	Medium fat	Low fat		
Diet fat, %	5.9	4.9	4.0	5.9	5.9		
Ile	79.8 <sup>a</sup>	72.9 <sup>bc</sup>	73.1 <sup>bc</sup>	75.2 <sup>b</sup>	71.9 <sup>c</sup>	0.94	<0.01
Lys	67.9 <sup>a</sup>	56.4 <sup>c</sup>	61.7 <sup>b</sup>	62.6 <sup>b</sup>	57.3 <sup>c</sup>	1.90	<0.01
Met	88.1 <sup>a</sup>	84.8 <sup>bc</sup>	83.6 <sup>c</sup>	85.8 <sup>b</sup>	85.0 <sup>bc</sup>	0.67	<0.01
Cys	76.0 <sup>a</sup>	67.3 <sup>c</sup>	68.8 <sup>bc</sup>	70.9 <sup>b</sup>	67.3 <sup>c</sup>	1.59	<0.01
Thr	73.4 <sup>a</sup>	66.9 <sup>c</sup>	68.2 <sup>bc</sup>	70.4 <sup>b</sup>	68.2 <sup>bc</sup>	1.29	<0.01
Trp	83.1 <sup>a</sup>	77.8 <sup>c</sup>	81.1 <sup>ab</sup>	81.0 <sup>abc</sup>	78.0 <sup>bc</sup>	1.21	<0.05
Val	80.5 <sup>a</sup>	74.2 <sup>bc</sup>	74.6 <sup>bc</sup>	75.9 <sup>b</sup>	73.0 <sup>c</sup>	0.95	<0.01

**Key Words:** amino acid digestibility, distillers dried grains with solubles, pigs