

Utilization of distillers dried grains with solubles (DDGS) in phase fed growing and finishing swine. E. L. Hansen*, G. W. Libal, D. N. Peters, and C. R. Hamilton, South Dakota State University, Brookings.

Four trials evaluated the use of DDGS in diets formulated for barrows and gilts for growth periods from 20-36, 36-59, 59-86 and 86-113 kg. The first treatment in each trial was a corn soybean meal diet balanced for threonine (THR), and supplemented with lysine (LYS). The second and third treatments, respectively, were diets with maximum levels of DDGS to meet the requirement for tryptophan (TRP) and methionine (MET), respectively. A fourth treatment had added MET to test the hypothesis that MET was less available in DDGS than original estimates. Crystalline LYS, THR and TRP were added to meet the digestible ideal protein ratio for each sex for each growth phase. From 20-36 kg, a depression in performance occurred for pigs fed the diet balanced for MET. Level of performance improved when MET was supplemented. Performance was equal for pigs receiving the first three diets for both sexes for the last three growth phases, but supplemental MET caused depressed feed intake and poorer performance. DDGS is a suitable feed ingredient for growing pigs. Availability of MET in DDGS appeared to be close to published values based upon pig performance.

	Diet 1	Diet 2	Diet 3	Diet 4	P	SD
ADG, kg	.71 ^b	.72 ^b	.67 ^a	.71 ^b	=.06	.025
G/F (20 to 36 kg)	.45	.47	.46	.48	NS	.015
PUN, mg/dl	11.64 ^a	12.25 ^a	7.62 ^b	7.77 ^b	<.01	.976
ADG, kg	.81	.84	.83	.79	NS	.040
G/F (36 to 59 kg)	.36 ^{bc}	.38 ^a	.38 ^{ab}	.36 ^c	<.05	.014
PUN, mg/dl	10.83 ^b	12.71 ^a	8.99 ^c	9.53 ^c	<.01	.616
ADG, kg	.89 ^a	.88 ^a	.85 ^a	.81 ^b	<.05	.031
G/F (59 to 86 kg)	.32 ^a	.32 ^a	.31 ^a	.29 ^b	<.05	.012
PUN, mg/dl	11.59 ^{ac}	13.19	9.42 ^b	10.86 ^{bc}	<.05	1.39
ADG, kg	.95	.91	.94	.90	NS	.053
G/F (86 to 113 kg)	.28 ^a	.29 ^a	.29 ^a	.26 ^b	<.05	.014
PUN, mg/dl	11.38 ^c	13.55 ^a	12.90 ^{ab}	12.14 ^{bc}	=.08	1.20

Key Words: Growing finishing swine, Digestible amino acids, Distillers dried grains with solubles

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