561 Digestible energy and metabolizable energy in distillers dried grains with solubles (DDGS) and enhanced DDGS. J. A. Soares*, H. H. Stein, V. Singh, and J. E. Pettigrew, *University of Illinois*, *Urbana*.

Distillers dried grains with solubles (DDGS) have a high fiber concentration. The elusieve process removes approximately 10% of the material, mostly fiber, yielding a product called enhanced DDGS (E-DDGS) that has a total dietary fiber concentration that is approximately 3.5 percentage units lower than DDGS. The objective of the experiment was to determine DE and ME in 2 sources of DDGS and in E-DDGS produced from each source of DDGS. Thirty growing pigs (average BW: 23kg) and 30 finishing pigs (average BW: 73kg) were used. Pigs were placed in metabolism cages and allotted to a randomized complete block design. Five diets were used at each stage of growth. The basal diet was based on corn and soybean meal and 4 additional diets were formulated by replacing 40% of the basal diet with 40% of each source of DDGS and E-DDGS. Pigs were fed their experimental diets for 14d, and urine and feces were collected during the final 5d. Overall, E-DDGS has greater DE ($P < 0.05$) and ME ($P < 0.05$) than DDGS. The DE and ME values were not different between growing and finishing pigs. In conclusion, removal of some of the fiber from DDGS by the elusieve process increases the energy concentration in the product. Overall, E-DDGS contains approximately 242 and 185 kcal/kg more DE and ME than DDGS.

Table 1. Daily energy balance for DDGS and E-DDGS

Item	Ingredient				SEM	*P*-value
	DDGS-1	DDGS-2	E-DDGS-1	E-DDGS-2		
Growing pigs						
DE, kcal/kg of DM	3,391^{x}	3,483^{xy}	3,703^{y}	3,670^{y}	147	0.001
ME, kcal/kg of DM	3,047	3,159	3,225	3,339	226	0.187
Finishing pigs						
DE, kcal/kg of DM	3,303^{x}	3,436^{x}	3,518^{xy}	3,691^{y}	209	0.027
ME, kcal/kg of DM	3,128^{x}	3,239^{xy}	3,293^{xy}	3,453^{y}	203	0.075

x,y Values within a row without a common superscript letter are different (P < 0.05).

Key Words: Pigs, Energy, Enhanced Distillers Dried Grain with Solubles

562 Effect of deoiled corn dried distillers grains with solubles (solvent extracted) on growth performance and carcass characteristics of growing and finishing pigs. J. Y. Jacela*[1], J. M. DeRouchey[1], S. S. Dritz[1], M. D. Tokach[1], R. D. Goodband[1], J. L. Nelssen[1], J. M. Benz[1], K. Prusa[2], R. C. Thaler[3], and D. E. Little[4], [1]*Kansas State University*, *Manhattan*, [2]*Iowa State University*, *Ames*, [3]*South Dakota State University*, *Brookings*, [4]*DairyNet Inc.*, *Brookings, SD*.

A total of 1,215 pigs (BW=29.6 kg) were used in a 99–d trial to determine the effect of deoiled corn dried distillers grains with solubles, solvent extracted, (dDGS) on growth and carcass characteristics. This product is dried distillers grains with a majority of the oil removed. Pigs were blocked on pen weight and randomly allotted to 1 of 5 dietary treatments (0, 5, 10, 20, or 30% dDGS). Diets had equal ME and standardized ileal digestible (SID) lysine content based on a previous study at Kansas State University. Pen weights were obtained every 2 wk from d 0 to 99 and ADFI was recorded on a pen basis. Increasing dDGS reduced (linear; $P < 0.01$) ADG and ADFI. The greatest reduction was in pigs fed over 20% dDGS. Carcass weight and percent yield were reduced (linear; $P < 0.01$), loin depth tended to decrease ($P < 0.09$), and jowl and belly IV increased (linear; $P < 0.01$) as dDGS was increased. There was no difference in backfat ($P > 0.26$), percent lean ($P > 0.16$), or FFLI ($P > 0.20$). In summary, feeding increasing levels of dDGS reduced ADG, ADFI, yield, and carcass weight and increased IV, but did not affect G:F. These data confirm the accuracy of the previously determined ME (2,506 kcal/kg) and SID values for dDGS; however, reasons for the reduced ADFI need further investigation.

Table 1.

Item	dDGS, %					SEM
	0	5	10	20	30	
D 0 to 99						
Final wt, kg	121.4	119.3	118.8	118.2	116.2	0.9
ADG, g	909	893	887	887	873	8.2
ADFI, kg	2.16	2.17	2.10	2.11	2.04	0.03
G:F	2.38	2.43	2.37	2.38	2.33	0.03
Carcass wt, kg	91.1	89.0	89.1	87.7	86.3	1.8
Yield, %	75.5	75.0	75.0	74.7	74.3	0.3
Backfat, mm	16.46	16.54	16.54	16.38	16.97	0.25
Loin depth, mm	2.50	2.45	2.46	2.48	2.39	0.03
Lean, %	56.5	55.9	56.3	56.4	55.8	0.2
FFLI, %	50.4	50.4	50.4	50.5	50.2	0.1
Jowl iodine value, g/100g	67.5	68.1	69.0	71.1	73.3	0.5
Belly iodine value, g/100g	67.1	68.0	69.1	72.4	73.7	0.6

Key Words: Swine, Dried Distillers Grains, Growth

563 Effect of dried corn distillers grains with solubles (DDGS) on growth performance of growing-finishing gilts with previous exposure to DDGS in the nursery. T. E. Burkey*, R. Moreno, E. E. Carney, and P. S. Miller, *University of Nebraska*, *Lincoln*.

A study was conducted to evaluate the effects of DDGS on growth performance of gilts, during the growing-finishing phase, that were previously fed high concentrations of DDGS (30%) during the nursery phase. A total of 24 crossbred gilts (initial BW 28.09 ± 0.73 kg) were used in a 98-d experiment. Twelve gilts with no prior exposure to DDGS, and 12 gilts that were fed high concentrations of DDGS (30%) in the nursery phase, were used in the current experiment. Pigs were individually penned and had ad libitum access to feed and water. The pigs were randomly allotted to 1 of 4 dietary treatments: 1) 0% DDGS in the nursery + 0% DDGS during the growing-finishing period; 2) 0% DDGS in the nursery + 30% DDGS during the growing-finishing period; 3) 30% DDGS in the nursery + 0% DDGS during the growing-finishing period; and 4) 30% DDGS in the nursery + 30% DDGS during the