

the sole source of CP and AA were formulated. Each period lasted 7 d and ileal digesta were collected on d 6 and 7 of each period. The SID of CP and all indispensable AA except Lys and Trp was greater ($P < 0.05$) in corn than in all corn co-products. Among corn co-products, the SID of CP, Lys, and Val were greater ($P < 0.05$) in CG, CGM-LCE, and LCE than in corn fiber, and the SID of Arg was greater in CG and CGM-LCE than in corn fiber and LCE, but for the remaining AA, no differences among corn co-products were observed. In conclusion, the corn co-products used in these experiments contain less ME and have reduced SID of most AA compared with corn, but there are no differences in ME among corn co-products and only few differences in SID of indispensable AA among corn fiber CG, CGM-LCE, and LCE.

Key Words: corn co-products, digestibility, pigs

O074 Effects of diet form and fiber level before marketing on growth performance, carcass yield, and iodine value of finishing pigs. J. Nemecek*, M. Tokach, J. DeRouchey, S. Dritz, R. Goodband, J. Nelssen, *Animal Science and Industry, Kansas State University, Manhattan.*

A total of 288 pigs (PIC 327 × 1050, 49.6 kg BW) were used in an 81-d trial to determine the effects of diet form and fiber feeding regimen on growth, carcass yield, and iodine value (IV) of finishing pigs. Treatments were arranged in a 2 × 3 factorial with main effects of diet form (meal vs pellet) and dietary fiber regimen. Fiber regimens were: 1) low fiber (corn-soybean meal) from d 0 to 81, 2) high fiber (30% DDGS and 19% wheat midds) from d 0 to 64 followed by low fiber from d 64 to 81 (fiber withdrawal), and 3) high fiber from d 0 to 81. There were 8 pigs per pen and 6 pens per treatment. No interactions ($P > 0.13$) were found. Overall, feeding pelleted diets increased ($P < 0.03$) ADG and G:F compared with feeding meal diets, with no difference ($P > 0.12$) in ADFI. Pigs fed low fiber throughout the trial had decreased ($P < 0.001$) ADFI and increased ($P < 0.001$) G:F compared with pigs fed the withdrawal regimen or high fiber throughout. Fiber regimen did not influence ($P > 0.35$) ADG. Pigs fed low fiber throughout or pigs withdrawn from high fiber diets had increased ($P < 0.001$) carcass yield compared to pigs fed high fiber throughout. Pigs fed meal diets had decreased ($P < 0.001$) belly fat IV compared with pigs fed pelleted diets. Compared with pigs fed high fiber throughout the trial, pigs fed the low-fiber regimen had decreased ($P < 0.001$) IV, with those fed the withdrawal regimen intermediate. In summary, feeding high-fiber diets increased ADFI and decreased G:F, regardless of withdrawal. Withdrawing DDGS and wheat midds allowed pigs to recover fully from losses in carcass yield, but only an intermediate improvement in belly fat IV was observed. Pelleting diets improved ADG and G:F, but worsened belly fat IV.

Diet form								
	Fiber level		Meal		Pellet			
	Low	High	Low	High	Low	High	High	SEM
d 0 to 64:								
ADG, kg	0.95	0.97	0.96	0.97	0.98	0.99	0.99	0.02
G:F	0.386	0.368	0.362	0.405	0.393	0.391	0.391	0.01
d 64 to 81:								
ADG, kg	0.93	0.97	0.88	1.02	1.03	0.97	0.97	0.03
G:F	0.317	0.296	0.273	0.322	0.303	0.306	0.306	0.00
d 0 to 81:								
ADG, kg	0.95	0.97	0.94	0.98	0.99	0.98	0.98	0.01
G:F	0.369	0.350	0.340	0.384	0.370	0.370	0.370	0.01
Carcass yield, %	75.1	74.7	74.1	75.0	74.8	73.4	73.4	0.24
Belly fat IV	65.7	71.7	74.7	67.0	75.5	78.4	78.4	0.37

Key Words: dried distillers grains with solubles, finishing pig, pellet

O075 The effects of medium-oil dried distillers grains with solubles on growth performance and carcass traits in finishing pigs. A. B. Graham*, R. D. Goodband, J. M. DeRouchey, M. D. Tokach, S. S. Dritz, J. L. Nelssen, S. Nitikanchana, *Kansas State University, Manhattan.*

An experiment was conducted to determine the effects of increasing medium-oil dried distillers grains with solubles (DDGS; 7.4% fat, 28.1% CP, 10.8% ADF, and 25.6% NDF) on growth performance and carcass traits in finishing pigs. A total of 288 pigs (PIC 327 × 1050; initially 68.9 kg) were allotted to 1 of 4 dietary treatments in a 61-d study. Treatments consisted of a corn-soybean meal control diet or the control diet with 15, 30, or 45% medium-oil DDGS. There were 8 pigs per pen and 8 replications per treatment. Diets were fed over 2 phases (69 to 100 and 100 to 126 kg) and not balanced for energy. Increasing medium-oil DDGS decreased (linear, $P < 0.02$) ADG and G:F. In addition, final BW, HCW, carcass yield, and loin-eye depth decreased (linear, $P < 0.03$), and jowl iodine value (IV) increased (linear, $P < 0.001$) with increasing medium-oil DDGS. The NRC 2012 values for ME and NE were assigned for the medium-oil DDGS. Caloric efficiency (CE) increased when expressed on an ME basis indicating it over-estimates the energy value of this medium-oil DDGS source. However on a NE basis, there was no difference in CE, suggesting that the NRC 2012 NE value (2,343 kcal/kg; 88% the value of corn) was a better estimate of the energy content of medium-oil DDGS. Typically, for every 10% traditional (> 10% fat) DDGS added to the diet, jowl IV increases approximately 2 mg/g; however, in this study, IV increased only 1.4 mg/g for every 10% inclusion. Thus, the IV increase for medium-oil DDGS is approximately 70% of the increase with high-oil DDGS. This difference was expected because the oil content in the medium-oil DDGS (7.4%) is approximately 70% of the oil content in high-oil DDGS (10.5%).

Item	Medium-Oil DDGS, %				SEM	Probability, $P <$	
	0	15	30	45		Linear	Quadratic
d 0 to 67							
ADG, g	875	848	838	817	10.44	0.01	0.77
G:F	0.320	0.313	0.313	0.307	0.004	0.02	0.99
Final BW, kg	127.3	125.8	125.2	124.0	1.06	0.03	0.87
Carcass yield, %	73.98	73.16	72.36	71.84	0.16	.001	0.35
HCW, kg	93.4	91.4	90.1	88.5	0.83	.001	0.82
Lean, %	53.1	52.8	52.8	52.7	0.23	0.32	0.65
Jowl iodine value	70.2	71.1	73.7	76.3	0.27	.001	0.01
Caloric efficiency, Mcal/kg							
ME	10.45	10.68	10.71	10.92	0.13	0.02	0.93
NE	7.78	7.86	7.80	7.86	0.09	0.62	0.90

Key Words: dried distillers grains with solubles, finishing pigs, iodine value

O076 Empiric narrowing of the net energy value of low-oil corn DDGS on pig growth performance and carcass characteristics. V. Zamora¹, M. Young^{1,*}, N. Campbell¹, B. Uttaro², E. Beltranena³, ¹Gowans Feed Consulting, Wainwright, AB, ²Agriculture and Agri-Food Canada, Lacombe, AB, ³Alberta Agriculture and Rural Development, Edmonton, Canada.

For the last 15 years, the North American ethanol industry has increased the availability of distillers dried grains with solubles (DDGS) for livestock feeding. However, in the last 2 years US ethanol plants have begun to partially remove the oil from corn DDGS, reducing it from 10–12 to 6–9%. Its dietary net energy (NE) value has therefore been reduced and needs re-establishing to properly consider the energetic contribution of this co-product to pig diets. To empirically narrow