

Table 1. Effect of feeding increasing level of FSBM¹ on growth performance and blood characteristics in nursery pigs.

	FSBM				SEM	Trt	P-value		
	0%	5%	10%	15%			Linear	Quad	Cub.
d 29 BW, kg	16.66	16.77	16.95	15.92	0.62	0.09	0.13	0.06	0.33
d 0-29 ADG, kg	0.37	0.372	0.379	0.343	0.012	0.06	0.09	0.06	0.29
d 0-29 ADFI, kg	0.46	0.46	0.47	0.42	0.02	0.02	0.03	0.04	0.26
d 0-40 ADFI, kg	0.63	0.62	0.61	0.57	0.02	0.03	0.01	0.18	0.55
d 0-40 G:F	0.65	0.67	0.67	0.68	0.01	0.33	0.07	0.98	0.68
WBC ² , k/ μ l	15.01	16.36	14.67	16.95	0.60	0.02	0.12	0.44	0.01
Neutrophil, k/ μ l	6.62	7.35	6.56	7.47	0.36	0.11	0.24	0.79	0.03
RBC ³ , M/ μ l	7.28	7.18	6.90	7.28	0.14	0.19	0.66	0.09	0.19

¹Fermented soybean meal²White blood cell³Red blood cell

Key words: fermented soybean meal, growth performance, blood characteristics

PSVI-20 Evaluating the productive energy content of high-protein distillers dried grains in swine diets.

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A total of 300 pigs (DNA 400×200; initially 11.1 kg) were used in a 21-d trial to determine the effects of increasing levels of high-protein distillers dried grains (HP DDG) on pig performance and to estimate the productive energy of HP DDG. Pens with 5 pigs each were assigned to treatments in a randomized complete block design with 12 replicates per treatment. Treatments included diets with 0, 10, 20, 30, or 40% HP DDG formulated by changing corn and feed-grade amino acid levels. Caloric efficiency was obtained by multiplying ADFI by dietary net energy (NE) and dividing by ADG. The NE of HP DDG was estimated at 1,914 kcal/kg by using Noblet et al. (1994) equation and NRC (2012) values were used for corn. Productive energy was estimated based the average caloric efficiency of the HP DDG diets relative to the diet without HP DDG. Data were analyzed with the GLIMMIX procedure of SAS with pen as the experimental unit and block as random effect. Pigs fed diets with increasing HP DDG had a linear decrease ($P < 0.01$) in ADG and ADFI and a tendency ($P = 0.051$) for a quadratic response in G:F. There was a linear improvement ($P < 0.01$) in caloric efficiency with increasing HP DDG (3,876, 3,753, 3,676, 3,520, and 3,300 kcal/kg, respectively). The productive energy of HP DDG was estimated as 2,686 kcal/kg or 97.3% of corn NE. In summary, high levels of HP DDG negatively impacted growth performance. The equation used to estimate NE of HP DDG resulted in underestimated values. The productive energy of HP DDG is approximately 97% of corn NE.

Table 1. Effects high-protein distillers dried grains (HP DDG) level on nursery pig performance

Item	HP DDG, %				SEM	Probability, $P <$		
	0	10	20	30		40	Linear	Quadratic
ADG, g	536	550	493	483	490	12.20	0.001	0.385
ADFI, g	830	855	778	755	746	18.21	0.001	0.715
G:F, g/kg	645	644	634	640	657	7.10	0.365	0.051

Key words: high protein distillers dried grains, growth performance, productive energy