

Table 1. Effects of iron injection timing on subsequent nursery growth performance

Item	None ²	Fe injection day ¹				
		1	3	5	7	1 and 12
BW, kg ^{4,5,6}						
d 73 ⁷	23.5	28.9	28.5	28.6	28.2	28.0
SEM	0.53	0.45	0.45	0.46	0.45	0.46
ADG, g ^{5,6}						
d 20 to 73	348	429	424	425	419	413
SEM	8.4	7.0	7.0	7.0	7.0	7.0
Mortality, %	6.3	4.4	3.2	5.5	1.9	5.4
SEM	1.9	1.2	1.0	1.3	0.80	1.3

¹200 mg of Fe (GleptoForte, Ceva Animal Health, LLC., Lenexa, KS) administered on d 1, 3, 5, 7, or d 1 plus d 12 after farrowing.

²Negative control with pigs receiving no Fe injection.

⁴Day of Fe injection main effect (linear; $P = 0.077$).

⁵0 vs. others ($P = 0.0001$).

⁶d 1 vs. d 1 and 12 ($P < 0.05$).

⁷Timepoint represent days after birth.

Keywords: iron, nursery, performance

263 Effects of soybean meal level on growth performance of 11- to 25-kg nursery pigs.

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Four experiments were conducted to determine the effects of increasing soybean meal (SBM) in diets with or without 25% DDGS on growth performance of nursery pigs. Treatments were arranged in a 2 × 3 factorial with main effects of SBM (27.5, 32.5, or 37.5%) and DDGS (0 or 25%). A total of 296, 2,502, 4,118, and 711 pigs, initially 10.6, 11.7, 12.5, and 12.3 kg, were used and there were 10, 16, 13, and 12 replicates per treatment in Exp. 1, 2, 3, and 4, respectively. Experimental diets were fed for 21 d. Pigs were weighed and feed disappearance measured to calculate ADG, ADFI, G:F, and caloric efficiency (CE). Data were analyzed using the GLIMMIX procedure of SAS with block as random effect and treatment as fixed effect. The average cull rate was 0.7, 0.5, 0.2, and 0% and the mortality rate was 0.7, 0.3, 0.4, and 0% in Exp. 1 to 4, respectively. There were interactions ($P \leq 0.039$) between SBM and DDGS for G:F and CE in Exp. 2 and for ADG and ADFI in Exp. 3. These were mostly driven by increasing SBM negatively affecting performance in a greater magnitude when diets contained DDGS compared to diets without DDGS. The main effects of DDGS and SBM were more consistent across experiments. Pigs fed diets with 25% DDGS had decreased ($P \leq 0.001$) ADG and ADFI in all experiments as well as poorer ($P \leq 0.028$) G:F and CE except for Exp. 3. Feeding increasing amounts of SBM generally did not result in any major impact in ADG, but consistently improved (linear, $P \leq 0.078$) G:F and CE across experiments. The mechanism for this response is unclear but could be driven by intrinsic components of SBM or underestimating the energy value of SBM.

Table 1. Effects of distillers dried grains with solubles (DDGS) and soybean meal (SBM) on growth performance of nursery pigs¹

Item ²	0% DDGS			25% DDGS			SEM	Significance ³
	27.5% SBM	32.5% SBM	37.5% SBM	27.5% SBM	32.5% SBM	37.5% SBM		
ADG, g								
Exp. 1	621	620	603	519	558	535	20.4	DDGS
Exp. 2	524	539	533	510	508	497	6.9	DDGS
Exp. 3	650	648	637	618	586	571	7.7	INT, DDGS, SBM
Exp. 4	592	570	598	510	531	529	21.5	DDGS
G:F, g/kg								
Exp. 1	677	686	679	616	655	656	12.3	DDGS
Exp. 2	660	676	681	665	661	679	5.1	INT, SBM
Exp. 3	673	678	686	666	674	674	5.0	DDGS, SBM
Exp. 4	682	685	698	651	664	675	11.1	DDGS, SBM

¹A total of 296, 2,502, 4,118, and 711 pigs were used with 10, 16, 13, and 12 replicates per treatment in Exp. 1, 2, 3, and 4, respectively.

²ADG = average daily gain. G:F = gain-to-feed ratio.

³INT = DDGS × SBM interaction ($P < 0.05$); DDGS = main effect of DDGS ($P < 0.05$); SBM = linear main effect of SBM ($P < 0.05$).

Keywords: caloric efficiency; energy; soybean meal