

156 Effects of feeding increasing amounts of finishing diet blended with nursery diets on growth performance and economics of nursery pigs.

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In wean-to-finish systems, nursery diets are commonly blended with leftover finishing feed from the previous group. A total of 1,260 pigs (initially 10.6 kg) were used in a 28-d study to determine the effects of feeding increasing amounts of finishing feed to nursery pig on growth performance and economics. At weaning, pigs were placed into pens (21 pigs/pen) and fed commercial nursery diets in a 5-phase program with phases 1 and 2 fed before the start of the experiment. Phase changes were based on feed budgets of 2.5, 3.7, 3.7, 9.5, and 9.5 kg/pig in phases 1 to 5, respectively. At the beginning of phase 3, pens of pigs were blocked by weight and room and allotted randomly to 1 of 4 treatments (15 replications/treatment). Treatments consisted of a dose-titration of blending increasing amounts (0, 1.25, 2.50, and 3.75 kg/pig) of a late finisher feed (0.74% SID Lys) into phase 3 nursery diet. Data were analyzed using the GLIMMIX procedure of SAS with the fixed effect of dietary treatment and random effects of weight block and room. Contrasts were used to determine the linear and quadratic effects of increasing finisher feed amount. Overall, increasing the amount of late finisher feed blended into the phase 3 nursery diet decreased ADG (linear, $P = 0.050$) and tended to decrease (linear, $P < 0.07$) ADFI and final BW, but did not affect G:F (Table 1). Feed cost, gain value, and feed cost/kg gain decreased (linear, $P < 0.05$) as finishing feed budget increased from 0 to 3.75 kg/pig. However, income-over-feed-cost was not different among treatments. In conclusion, feeding increasing amounts of late finisher feed to 11-kg nursery pigs decreased overall ADG and ADFI, but did not affect income-over-feed-cost.

Table 1. Effects of blending increasing amounts of finishing feed into nursery diets on growth performance and economics

Item	Finisher feed budget, ¹ kg/pig				SEM
	0	1.25	2.5	3.75	
ADG, g	518	526	512	502	8.4
G:F, g/kg	668	661	678	666	4.7
Income-over-feed-cost, \$/pig	11.96	12.25	12.22	12.20	0.198

¹ Blending increasing amounts (kg/pig) of a late finisher feed into to phase 3 (11 kg body weight) nursery diet.

Key words: blending, finishing feed, nursery pigs

155 Effects of soybean meal level and distillers dried grains with solubles inclusion on growth performance of late nursery pigs.

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Two experiments were conducted to determine the effects of soybean meal (SBM) level in diets with or without distillers dried grains with solubles (DDGS) on growth performance of late nursery pigs. A total of 1,064 and 1,011 pigs (PIC 280×1050; initially 10.5 ± 0.36 and 10.9 ± 0.22 kg) were used in Exp. 1 and 2, respectively, with 21 to 27 pigs per pen. Pens were assigned to treatments in a randomized complete block design with 7 replicates per treatment per experiment. Treatments 1 to 3 were diets with 23% DDGS and 21, 27, or 35% SBM. Treatments 4 and 5 were corn-SBM diets with 27 or 35% SBM. Diets were balanced to 1.30% standardized ileal digestible lysine and 2,606 kcal of net energy/kg. Data were analyzed with the GLIMMIX procedure of SAS with pen as the experimental unit and block as random effect. There was no evidence for treatment × experiment interactions, thus data from both trials were combined. Feeding diets with 23% DDGS decreased ($P = 0.033$) ADFI and improved ($P = 0.033$) G:F compared to corn-SBM diets, which may indicate underestimation of DDGS net energy. When analyzed as a factorial with or without DDGS, pigs fed diets with 35% SBM had a tendency ($P = 0.052$) for increased ADG and improved ($P = 0.001$) G:F compared with diets with pigs fed 27% SBM. As SBM increased from 21 to 35% in diets with DDGS, ADG (linear, $P = 0.001$) and G:F (quadratic, $P = 0.007$) improved. In summary, feeding diets with increasing SBM improved growth performance in late nursery pigs.

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

Treatment	1	2	3	4	5	SEM
SBM	21%	27%	35%	27%	35%	
DDGS	23%	23%	23%	---	---	
ADG ^{1,2} , g	524	527	533	549	548	9.75
ADFI ³ , g	782	785	791	827	792	15.81
G:F ^{3,4,5} , g/kg	670	672	700	665	692	4.25

¹ SBM 27 vs. 35%, $P = 0.052$

² SBM level in diets with DDGS (linear), $P = 0.001$

³ DDGS 0 vs. 23%, $P = 0.033$

⁴ SBM 27 vs. 35%, $P = 0.001$

⁵ SBM level in diets with DDGS (quadratic), $P = 0.007$

Key words: distillers dried grains, growth performance, soybean meal