

**Table 1. Effects of ractopamine (RAC) dose on growth performance traits**

Trait	NRC Control	RAC 5 ppm	RAC 7.4 ppm	Pooled SEM	P-Value
Pens	24	24	24	-	-
Initial BW, kg	116.0	115.9	115.9	0.81	0.99
Day 14 BW, kg	128.5 <sup>a</sup>	130.4 <sup>ab</sup>	131.1 <sup>b</sup>	0.57	0.03
Final BW, kg <sup>d</sup>	134.7 <sup>a</sup>	136.7 <sup>b</sup>	137.8 <sup>b</sup>	1.19	0.01
BW gain, kg <sup>d</sup>	18.61 <sup>a</sup>	20.74 <sup>b</sup>	21.86 <sup>c</sup>	1.61	0.01
ADG, kg/d <sup>d</sup>	0.90 <sup>a</sup>	1.00 <sup>b</sup>	1.06 <sup>c</sup>	0.08	0.01
ADFI, kg/d <sup>d</sup>	2.75	2.71	2.72	0.12	0.74
G:F <sup>d</sup>	0.33 <sup>a</sup>	0.37 <sup>b</sup>	0.39 <sup>c</sup>	0.01	0.01

<sup>a,b,c</sup> Means with different superscripts differ ( $P < 0.05$ ); <sup>d</sup> Based on an average of 21 d.

**Key Words:** pig, ractopamine, growth performance

**261 Evaluation of ractopamine HCl feeding methods on growth performance and carcass characteristics of finishing pigs.** W. Ying,\* J. M. DeRouche, M. D. Tokach, S. S. Dritz, R. D. Goodband, and J. L. Nelssen, *Kansas State University, Manhattan.*

A total of 934 barrows and gilts (PIC 337 × 1050, initially 109 kg) were used to evaluate the effect of different ractopamine HCl (RAC) feeding programs on growth and carcass traits of finishing pigs. Treatments were a basal diet with: 1) no RAC for 26 d (control), 2) 7.5 ppm RAC for 26 d (constant), 3) 5 ppm RAC for d 0 to 14 and 10 ppm for d 14 to 26 (step-up), and 4) RAC level increased daily from 5 ppm on d 0 to 10 ppm on 26 d by using the FEEDPro system (curve). Each treatment had 10 pens with approximately equal number of barrows and gilts per pen. From d 0 to 14, pigs fed RAC had greater ( $P < 0.01$ ) ADG and G:F than control pigs. Constant or step-up RAC feeding methods had greater ADFI ( $P < 0.04$ ) than control pigs. From d 14 to 26, pigs on step-up RAC program had greater ( $P < 0.005$ ) ADG and G:F than constant RAC treatment. All RAC-fed pigs had greater ADG ( $P = 0.03$ ) and G:F ( $P = 0.0001$ ) than control pigs. Overall, pigs fed RAC diets had greater ( $P < 0.0001$ ) ADG and G:F than control pigs. In addition, pigs on the step-up RAC program had greater ADG ( $P = 0.01$ ) and G:F ( $P < 0.05$ ) than constant RAC treatment. Pigs fed RAC had heavier HCW ( $P < 0.01$ ) than control pigs. Pigs fed constant RAC had greater yield ( $P = 0.002$ ) than control pigs. Also, pigs fed either constant or curve RAC had greater loin depth ( $P = 0.006$ ) than control pigs. There were no differences ( $P > 0.10$ ) in carcass traits among RAC treatments. In conclusion, feeding RAC improved performance regardless of feeding method but few differences were present between the RAC feeding programs.

**Table 1. Effect of RAC feeding methods on growth and carcass traits**

		Control	Constant	Step-up	Curve	SEM
d 0-14	ADG, g	829 <sup>a</sup>	1059 <sup>b</sup>	1082 <sup>b</sup>	1089 <sup>b</sup>	38.3
	ADFI, kg	2.45 <sup>a</sup>	2.60 <sup>b</sup>	2.61 <sup>b</sup>	2.49 <sup>ab</sup>	0.07
	G:F	0.34 <sup>a</sup>	0.41 <sup>b</sup>	0.42 <sup>b</sup>	0.44 <sup>b</sup>	0.02
d 14-26	ADG, g	888 <sup>a</sup>	995 <sup>b</sup>	1160 <sup>c</sup>	1086 <sup>bc</sup>	45.2
	ADFI, kg	2.97	2.79	2.84	2.93	0.09
	G:F	0.30 <sup>a</sup>	0.36 <sup>b</sup>	0.41 <sup>c</sup>	0.37 <sup>b</sup>	0.02
d 0-26	ADG, g	849 <sup>a</sup>	1038 <sup>b</sup>	1110 <sup>c</sup>	1088 <sup>bc</sup>	26.8
	ADFI, kg	2.63	2.67	2.69	2.64	0.07
	G:F	0.32 <sup>a</sup>	0.39 <sup>b</sup>	0.42 <sup>c</sup>	0.41 <sup>bc</sup>	0.01
	HCW, Kg	91.1 <sup>a</sup>	95.4 <sup>b</sup>	94.7 <sup>b</sup>	94.9 <sup>b</sup>	1.2
	Yield, %	74.3 <sup>a</sup>	75.3 <sup>b</sup>	74.8 <sup>ab</sup>	74.8 <sup>ab</sup>	0.3
	Loin, cm	6.04 <sup>a</sup>	6.39 <sup>b</sup>	6.20 <sup>ab</sup>	6.35 <sup>b</sup>	0.12

<sup>a,b,c</sup>  $P < 0.05$ .

**Key Words:** growth, pig, ractopamine

**262 Effect of mix time for diets with ractopamine when fed to finishing pigs.** C. B. Paulk,\* L. J. McKinney, J. D. Hancock, S. M. Williams, S. Issa, and T. L. Gugle, *Kansas State University, Manhattan.*

Two experiments were completed to determine the effects of mix time for diets with ractopamine HCl (RAC) when fed to finishing pigs. In Exp. 1, 160 pigs (average BW of 93 kg) were fed for 27 d in a completely randomized design (2 pigs/pen and 16 pens/treatment). The control was corn-soybean meal-based with ingredients added to an idle mixer. The mixer was started and the diet mixed for 360 s before discharge. Other treatments were separate batches of that same formulation with 10 mg/kg RAC. Mix times of none, 30, 120, and 360 s before discharge for the diets with RAC yielded CVs of 51, 19, 15, and 12% for the distribution of salt (Quantab assay). Use of RAC improved ( $P < 0.01$ ) ADG, G:F, HCW, loin depth, and percentage carcass lean. However, increasing mix time from none to 360 s for diets with RAC had no effect ( $P > 0.19$ ) on those same response criteria. Means were: 1.08, 1.25, 1.24, 1.29, 1.26 kg for ADG; 288, 329, 322, 342, and 336 g/kg for G:F; 88.5, 92.9, 93.9, 95.1, and 93.9 kg for HCW; 21, 19, 20, 19, and 20 mm for backfat thickness; and 62, 70, 67, 67, and 71 mm for loin depth. In Exp. 2, 200 pigs (average BW of 90 kg) were fed for 33 d in a randomized complete block design (5 pigs/pen and 8 pens/treatment). The control was the same as in Exp. 1 (i.e., corn-soy-based and mixed for 360 s). Other treatments were separate batches of the mixed control with 10 mg/kg RAC added and the batches mixed additionally for none, 30, 120, and 360 s. As for pig growth, RAC improved ( $P < 0.01$ ) ADG, G:F, HCW, dressing percentage, back-fat thickness, loin depth, and percentage carcass lean. Increasing mix time of diets with RAC had no effect ( $P > 0.15$ ) on those same response criteria. Means were: 1.15, 1.20, 1.24, 1.23, 1.25 kg for ADG; 284, 330, 337, 320, and 335 g/kg for G:F; 94.9, 97.4, 99.4, 97.1, and 98.6 kg for HCW; 22, 19, 20, 21, and 19 mm for backfat thickness; and 61, 66, 66, 69, and 68 mm for loin depth. In conclusion, increasing mix time from none to 360 s did not affect the response to RAC in finishing pigs.

**Key Words:** mix uniformity, ractopamine, finishing pig