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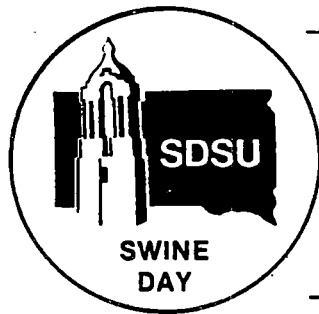
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**PERFORMANCE OF FINISHING PIGS AS AFFECTED BY
PRIOR PERFORMANCE AND THE ADDITION OF AN
ANTIBIOTIC DURING THE FINISHING PERIOD**
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Department of Animal and Range Sciences

SWINE 85-9

In a study reported last year (SWINE 84-12), we reported that pigs which had grown slowly from 50 to 115 lb continued to grow slower to market weight than their medium or fast growing counterparts. It was also found that the addition of a growth promoting level of an antibiotic failed to increase performance of the slow growing pigs. The study reported herein is a repeat of the previous study to verify the results.

(Key Words: Finishing Swine, Previous Growth Rate, Antibiotics, Aureomycin.)

Table 1. Composition of Experimental Diet.

Ingredient	%
Ground yellow corn	78.4
Soybean meal, 44%	18.8
Dicalcium phosphate	1.2
Limestone	.9
Salt, white	.3
Premix ^a	.4

^a Provided the following in ppm: zinc, 100; iron, 75; copper, 7.5; manganese, 25; iodine, .175; and selenium, .1. Provided the following per lb of diet: vitamin A, 2000 IU; vitamin D, 200 IU; riboflavin, 2.25 mg; pantothenic acid, 9 mg; niacin, 12 mg; vitamin B₁₂, 9 mcg; vitamin E, 7.5 IU and vitamin K, 1.5 mg.

Experimental Procedure

Performance of 174 crossbred pigs was observed from approximately 40 to 120 lb. These pigs were sorted into slow growing, medium growing and fast growing groups. From within these growth outcome groups 140 pigs were allotted to three replications of two treatments (0 or 50 g/ton Aureomycin). All pigs were fed a 15% protein corn-soybean meal diet (table 1). Each of the 18 pens contained 4 gilts and 4 barrows. The

finishing phase of the experiment (115-220 lb) was conducted in the environment-modified confinement building at the Southeast South Dakota Experiment Farm at Beresford, South Dakota during October through December. Pig weights were recorded on a biweekly basis. Pigs were removed from test on a pen basis when average pig weight within a pen reached approximately 210 lb.

Results

A summary of overall performance is presented in table 2 and performance summarized by previous performance and by antibiotic treatment is presented in tables 3 and 4. Pigs which had grown slowly during the growing period gained significantly faster during the finishing period. A greater gain response for slow growing pigs over medium and fast growing pigs was obtained in those groups which had received antibiotics. However, feed consumption and feed/gain were not affected by previous performance. Overall, no response due to the presence of antibiotic was observed as summarized in table 4. All groups of pigs performed at a level which would limit the potential for improving performance with growth promoting antibiotics.

The results of this trial are in contrast with the previously reported trial (Swine 84-12) where slow growing pigs continued to grow slower than their previously faster growing counterparts. The failure to get a response to antibiotics during the growing period is in agreement with the results of the previous trial.

Table 2. Effect of Previous Performance and Antibiotic in the Diet of Pigs During the Finishing Period

Previous growth rate	Slow		Medium		Fast	
Antibiotic	-	+	-	+	-	+
No. of pigs	24	24	24	24	24	24
Initial wt, lb	121	121	132	132	125	125
Final wt, lb	214	214	214	219	216	211
Avg daily gain, lb ^a	2.20	2.19	2.11	2.03	2.11	2.03
Avg daily feed, lb	6.63	6.55	6.57	6.28	6.42	6.19
Feed/gain	3.03	3.00	3.12	3.09	3.05	3.07

^a

Previously slow growing pigs gained faster ($P < .01$) than previously medium or fast growing pigs.

Table 3. Effects of Previous Performance
on Finishing Pig Performance

Previous growth rate	Slow	Medium	Fast
No. of pigs	48	48	48
Initial wt	121	132	125
Final wt	214	217	214
Avg daily gain, lb ^a	2.20	2.07	2.07
Avg daily feed, lb	6.59	6.43	6.31
Feed/gain	3.02	3.11	3.06

^a Previously slow growing pigs gained faster ($P < .01$) than previously medium or fast growing pigs.

Table 4. Effects of Antibiotic
on Finishing Pig Performance

	Without Antibiotic	With Antibiotic
No. of pigs	72	72
Initial wt, lb	126	126
Final wt, lb	215	215
Avg daily gain, lb ^a	2.14	2.08
Avg daily feed, lb	6.54	6.34
Feed/gain	3.07	3.05

^a Aureomycin, 50 g/ton.

Summary

One hundred forty-four pigs were sorted by growth rate from 40 to 120 lb into slow, medium and fast growing groups. They were then allotted to treatments of 0 or 50 g/ton of Aureomycin. During the finishing period, slow growing pigs gained significantly faster than previously medium and fast growing pigs. No differences in feed intake or feed/gain was found. No difference in performance due to presence of antibiotics was observed.