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Evaluation of various antibiotics on growth rate and feed efficiency of finishing pigs

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Summary

We used 150 Yorkshire finishing pigs averaging 120 lbs initially to evaluate the following antibiotics: Tylan, Stafac, Oleandomycin, and Flavomycin on rate and efficiency of gain. The trial ended when pigs within a replicate averaged approximately 220 lbs. There were no significant differences in rate or efficiency of gain by pigs fed nonmedicated or medicated diets.

Introduction

Although many antibiotics effectively increase rate of gain and improve feed efficiency in swine, the response to antibiotics decreases as pigs get larger. This study was conducted to evaluate various antibiotics on rate and efficiency of gain with finishing pigs.

Procedures

One hundred and fifty Yorkshire pigs averaging 120 lbs. initially were randomly allotted according to weight, sex, and litter to 15 pens representing three replications of five treatments. Pigs were housed in a slatted floor, modified open front building. Each pen contained a self-feeder

and an automatic watering cup. The 14% protein basal diet contained 81.6% sorghum, 15% soybean meal (44%), 1.3% dicalcium phosphate, 1.1% limestone, .4% salt, .5% vitamin, and .1% trace-mineral premix. The diets were fed in meal form. The experiment was from May through August, 1978. In an attempt to reduce heat stress, pigs were wetted with foggers (1.7 gals. per hour) when the temperature exceeded 80 F. The treatments were:

- 1) Basal diet - nonmedicated (control)
- 2) Basal diet + 20 grams Tylosin per ton (Tylan)
- 3) Basal diet + 10 grams Virginiamycin per ton (Stafac)
- 4) Basal diet + 5 grams Oleandomycin per ton
- 5) Basal diet + 2 grams Bambermycin per ton (Flavomycin)

Results and Discussion

Adding various low levels of antibiotics to the diets of finishing pigs did not significantly ($P < .05$) improve rate or efficiency of gain (table 5). There were no significant differences among pigs fed the various antibiotics.

Daily gains were poor for all pigs in this trial, probably because of extreme heat in July and August. Daily feed intake was considerably less than normal for finishing pigs.

These results suggest no economic benefits from feeding low levels of the antibiotics tested during the finishing period.

Table 5. Performance of finishing pigs fed various antibiotics.^a

Criteria	Antibiotic				
	None ^b (Control)	Tylan	Stafac ^b	Oleando- mycin	Flavo- mycin
Daily gain, ^c lbs	1.22	1.31	1.23	1.26	1.21
Daily feed, ^c lbs	4.77	5.15	4.80	4.86	4.78
Feed/gain ^c	3.91	3.93	3.90	3.86	3.95

^aEach value is the mean of three pigs of 10 pigs each.

^bOne pig died in each of these treatments.

^cNo significant ($P < .05$) differences among treatments.