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Evaluation of Antibacterial Preparations on Growth Rate and Feed Efficiency of Young Pigs

Gary L. Allee, R. H. Hines and B. A. Koch

Summary

Ninety-six young pigs were used to evaluate various antibacterial preparations on rate and efficiency of gain. Each of the antibacterial preparations increased rate of gain over pigs fed the non-medicated basal diet. There were no significant differences in daily gains of pigs fed ASP-250, CSP-250, Lincomix, Mecadox, or Stafac.

Procedures

Ninety-six pigs averaging 26.5 pounds were allotted to treatments by weight and litter. Pigs had been weaned for 7 to 10 days before allotted to treatments. Pigs were housed in a totally slatted-floor, environmentally-controlled nursery with temperature maintained at 75 - 80 F. Each pen contained a self-feeder and an automatic watering cup. The 18% protein basal diet contained 69.4% corn, 26.6% soybean meal (44%), 1.6% dicalcium phosphate, 0.9% limestone, 0.5% salt, and 1.0% vitamin, trace-mineral premix. The diets were fed in meal form. Pigs were fed the experimental diets 35 days. The treatments were:

- 1) Basal diet - nonmedicated
- 2) Basal diet + 100 grams chlortetracycline, 100 grams sulfamethazine, and 50 grams of penicillin per ton (ASP-250)
- 3) Basal diet + 100 grams chlortetracycline,

100 grams sulfathiazole, and 50 grams of penicillin per ton

- 4) Basal diet + 100 grams of lincomycin (Lincomix) per ton for 21 days and then 40 grams
- 5) Basal diet + 50 grams per ton of carbadox (Mecadox)
- 6) Basal diet + 25 grams per ton of virginiamycin (Stafac).

Results and Discussion

Pigs fed the diets supplemented with the various antibacterial preparations gained significantly ($P < .05$) faster than those fed the non-medicated basal diet (table 31), with no significant differences among the various antibacterial preparations. Feed efficiency was improved by each of the antibacterial preparations except Mecadox. We cannot explain the poor feed efficiency of the pigs fed Mecadox. In previous trials (Swine Industry Day, 1973) Mecadox improved feed efficiency.

Close attention was given to fecal consistency to evaluate effects of the antibacterial preparations on the incidence of diarrhea. Diarrhea was not a problem with any of the pigs.

Table 31 . Performance of pigs fed indicated antibacterial preparation.

Indicated item	<u>Antibacterial preparation</u>					
	None	ASP-250	CSP-250	Lincomix	Mecadox	Stafac
No of pigs	16	16	16	16	16	16
Initial wt., lbs.	27.1	26.2	26.5	26.4	25.9	26.7
Daily gain, lbs.	1.20 ^a	1.32 ^b	1.31 ^b	1.40 ^b	1.42 ^b	1.33 ^b
Feed/gain	2.20 ^b	1.96 ^c	2.09 ^c	2.04 ^c	2.41 ^d	2.03 ^c

a,b,c,d Means with different superscripts differ significantly ($P < .05$).