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Comparison of Anthelmintics for Pigs
Raised in Outside Lots

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Summary

One hundred fifty crossbred pigs averaging 21 lbs. initially were used to evaluate the effects of Banminth or Tramisol on performance of pigs housed in worm-contaminated dirt lots. Neither anthelmintic significantly affected average daily gain or feed efficiency. Pigs fed Banminth continuously were 5% more efficient in feed utilization during the starter phase and 4% more efficient in feed utilization during the grower phase than nonwormed pigs. Pigs fed Banminth had no liver scarring and no ascarids in gastrointestinal tracts at 125 pounds. Untreated pigs and those treated with Tramisol had liver scarring and ascarids in the gastrointestinal tracts at 125 pounds.

Introduction

We evaluated the benefits of Banminth fed at 96 grams per ton from weaning to 125 pounds and compared performances of pigs wormed once via water with Tramisol and those not wormed when raised in worm-contaminated dirt lots.

Procedures

One hundred fifty crossbred pigs averaging 21 pounds initially were randomly assigned, based on litter, sex, and initial weight to six outside lots. Each lot contained a large self-feeder, an automatic waterer, and a portable shelter. Composition of the basal starter and grower diets is shown in table 31. Treatments were:

- A. Basal diet, no anthelmintic
- B. Basal diet plus 96 grams/ton of pyrantel tartrate (Banminth)
- C. Basal diet plus one treatment of levamisole hydrochloride (Tramisol) in the water when pigs weighed approximately 50 pounds.

When pigs weighed 75 pounds, they were switched to the grower diets. Level of infection was determined by fecal egg counts. At the end of the trial (125 pounds), four pigs per treatment were killed to examine for liver lesions and determine ascarid population in the gastrointestinal tracts.

Results and Discussion

Pig performance data are presented in table 32. There were no significant differences in average daily gain or feed efficiency from either

anthelmintic treatment during the starter or grower phases. Pigs fed Banminth were 5% more efficient in feed utilization than nonwormed pigs during the starter phase and 4% more efficient during the grower phase.

Worm egg counts on day 70 of the trial were markedly reduced by either Banminth or Tramisol. Nonwormed pigs had an average of 398 ascarid eggs per gram of fecal material indicating the heavy worm infestation in nonwormed pigs.

Four pigs per treatment were necropsied at the end of the 86-day trial (table 33). None of the pigs fed Banminth had scars on the livers, while all livers of nonwormed pigs were severely scarred. Pigs treated with Tramisol had moderate liver scarring. Nonwormed pigs had numerous (50-100) mature and immature ascarids. Pigs treated with Tramisol had fewer and less mature ascarids than nonwormed pigs. Pigs fed 96 g of Banminth continuously had no liver scars and no ascarids were found in their gastrointestinal tracts.

Table 31. Composition of Basal Diets

Diet Period fed	Starter start to 75 lbs.	Grower 75 to 125 lbs.
Ingredient	%	%
Sorghum grain	69.70	77.05
Soybean meal	26.00	20.00
Dicalcium phosphate	1.70	.80
Limestone	1.00	.90
Salt	.50	.50
Vitamin premix	.50	.50
Trace mineral premix	.10	.05
Tylan-10	.50	.20
Total	100.00	100.00

Table 32. Effects of Anthelmintics on Pig Performance^a

Anthelmintic	None	Banminth ^b	Tramisol ^c
Starter phase - 44 days (21 to 70 lbs)			
Average daily gain, lbs.	1.10	1.13	1.13
Feed:gain	2.35	2.23	2.31
Grower phase - 42 days (70-138 lbs)			
Average daily gain, lbs.	1.64	1.56	1.62
Feed:gain	3.30	3.16	3.30
Combined starter and grower - 86 days (21-138 lbs)			
Average daily gain, lbs.	1.37	1.34	1.36
Feed:gain	2.94	2.84	2.91

^aEach value is the mean of two pens of 25 pigs each.

^bFed continuously at 96 grams/ton.

^cGiven once via water.

Table 33. Effect of Anthelmintic on Necropsy Evaluation^a

Anthelmintic	None	Banminth	Tramisol
Liver scarring	severe	none	moderate
No. of livers with scars	4/4	0/4	4/4
No. of pigs with ascarids	4/4	0/4	4/4

^aEach value is the mean of four pigs.