K

S

U

Two Antibiotic Combinations With and Without Vitamin E or Fermentation Product in Rations for Growing Pigs

B.A. Koch and R.H. Hines

Summary

Growing pigs fed ASP-250 from birth to market gained equally as well as those fed TNT. Feed conversion values were quite similar. Adding a fermentation product or vitamin E to rations did not produce consistently better gains or feed efficiency.

Procedure

One hundred pigs were used; each received the same antibiotic mixture from birth to market. Each remained in the same feeding group during the nursery and growing-finishing phases of the study.

During the nursery phase (January 2 to 30) pigs were housed in the K.S.U. swine nursery, 10 pigs in each pen. Basic nursery rations were self-fed from two-hole feeders. Water was available at all times. Pigs were on totally slotted floors.

After a four-week feeding period pigs were moved from the nursery to the finishing house. The ration was changed to a basic, fortified, sorghum grain-soybean meal. Each pen of pigs continued to receive the same antibiotic mixture as it did in the nursery. Compositions of the rations are shown in table 14. The pigs were fed 70 days beginning February 4.

Results and Discussion

Performance of pigs during both nursery and growing periods is summarized in tables 15 and 16. Data from the nursery and growing periods were analyzed separately.

The pigs averaged 29 pounds each at the beginning of the nursery period. After 28 days on feed they averaged 63 pounds. Analysis of data showed no significant differences in weight gains by various treatment groups.

Average weight of the pigs at the beginning of the growing period was 66 pounds; at the end of the period, 195 pounds. Analysis of weight gain data indicated significant differences among treatment groups. Pigs receiving supplemental vitamin E during the finishing phase gained significantly slower than those that received the control ration during both nursery and growing periods. Those getting vitamin E also gained significantly slower than those that received Ferma-Gro during both nursery and growing periods. Differences were not significant in growth rates of pigs receiving the control ration and those on the ration containing Ferma-Gro.

Table 14. Basal Pelleted Growing-finishing Ration

Ingredients	Pounds per ton of ration
Ground sorghum grain	1522
Soybean meal (44%)	400
Ground limestone	20
Dicalcium phosphate	28
Salt	10
Vit-Mineral Premix[1]	20

[1]Each pound of vitamin-mineral premix contains: 15,000 I.U. of vitamin D; 250,000 I.U. of vitamin A; 2000 mg. choline chloride; 600 mg. niacin; 200 mg. riboflavin; 400 mg. pantothenic acid; 500 mcg. vitamin B_{12}; 4,500 mg. manganese; 4500 mg. iron; 2250 mg. zinc; 450 mg. cooper; 45 mg. cobalt; and 135 mg. iodine.

Table 15. (Phase 1). Performance of Pigs During 28-Day Nursery Period

Antibiotic	No pigs	Av. daily gain, lbs.	Av. feed eff., lbs.	Av. daily feed intake, lbs.
Aureo SP-250[1]	50	1.22	1.90	2.37
TNT[2]	50	1.23	1.82	2.17
Additive				
Control	40	1.18	1.85	2.25
+Ferma-Gro[3]	20	1.27	1.76	2.18
+Ferma-Gro + MNC[4]	40	1.22	1.98	2.38

[1]Each ton of feed contained 100 grams of aureomycin, 100 grams of sulfmethazine, and 50 grams of penicillin.

[2]Each ton of feed contained 100 grams of terramycin and 70 grams of neomycin.

[3]Each ton of feed contained 1 pound of Ferma-Gro.

[4]Each ton of feed contained 1 pound of Ferma-Gro, and 200 pounds of milk nutrient concentrate replaced 200 pounds of dried skim milk, which lowered crude protein in the ration.

Table 16. (Phase II). Performance of Pigs During the Finishing Period.[6]

Antibiotic	No. Pigs	Avg. daily gain, lbs.	Avg. feed eff., lbs.	Avg. daily feed intake, lbs.
Aureo SP-250[1]	49	1.83	3.09	5.62
TNT[2]	47	1.83	3.11	5.58
Additive				
Control	38	1.85	3.10	5.67
+Ferma-Gro[3]	39	1.84	3.08	5.55
+Vit. E[7]	19	1.77	3.13	5.40

[6]See footnotes on table 15 above.

[7]Each ton of feed contained 20,000 I.U. of added vitamin E.