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On-Farm Evaluation of Commercial Feed¹ and Type of Medication for Weaned Pigs

D.S. Pollmann, S.C. Henry² and E. Francis

Summary

A trial was conducted to evaluate the influence of diet composition and type of medication on pigs weaned at approximately 5 weeks of age (average initial weight of 15 pounds). A commercial feeding program containing extruded full fat soybeans was compared with a milo-soybean meal diet (19.2% protein and 1.25% lysine) containing neomycin (150 grams per ton) or neoterramycin (150 grams of neomycin and terramycin each per ton). Pigs were fed the treatments for 6 weeks while in the nursery. Performance was monitored continuously to market weight to evaluate the influence of the nursery treatments on the overall growth and carcass yield. The results of this study suggest that neoterramycin is superior ($P < .05$) to neomycin in starter pig diets. Pigs consuming the commercial feed had improved ($P < .05$) gain, feed efficiency, and number of days to market. But in this herd, the commercial feed increased mortality rate due to gut edema and increased feed cost per pound of gain ($P < .05$).

Introduction

Diet composition and type of medication for newly weaned pigs is an important factor in overall production efficiency. However, many starter feeds tend to be expensive due to some of the more commonly added ingredients such as milk products (dried skim milk, dried whey), fish meal, brewers grains, oats, and fat. Therefore, a study was conducted to evaluate the effect of diet composition (complex vs simple) and type of medication in newly weaned pigs.

Experimental Procedures

In an on-farm trial, newly weaned 5 week old pigs were randomly allocated into one of three dietary treatment groups: ³1) control diet containing 150 grams of neomycin, 2) commercial feeding program, 3) control diet with neoterramycin (150 grams of neomycin, 150 grams of terramycin). Treatments 1 and 3 were milo-soybean meal diet (calculated levels of protein and lysine were 19.2 and 1.25%) processed on-farm using a hammer mill. The commercial feed (3 phase program) had extruded soybeans, making the fat level higher than the control diet. (Table 1). Samples of the feeds were analyzed for protein, ether extract (fat), calcium, phosphorus, glucose, starch, and water soluble carbohydrates.

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gain. Pounds produced were calculated for each treatment by multiplying the number of pigs by average final weight and then correcting for mortality and morbidity. The commercial feed treatment group produced the fewest total pounds of pork.

In Table 3, the effect of the starter diet treatment on subsequent performance is shown. Eighty-eight pigs were randomly selected and slaughter data collected. Pigs in the control group gained significantly ($P<.05$) slower than those pigs on the commercial feed or neoterramycin treatment ($P<.05$). Pigs on the control diet had higher ($P<.05$) yield percentages than pigs on the commercial feed and neoterramycin treatments.

These results suggest that neoterramycin was superior to neomycin in starter pig diets. Pigs consuming the commercial feed had improved gain, improved feed efficiency, and decreased number of days to market. In this herd, the commercial feed increased mortality rate and feed costs per pound of gain.

Table 1. Feed Analyses^a

	Commercial Feed			Milo-Soybean meal	
	Starter #1	Starter #2	Grind & Mix	Control	Neoterramycin
Dry matter, %	90.39	87.60	87.39	85.56	88.19
Crude protein, %	25.1	25.6	22.2	21.2	19.3
Ether extract, %	10.9	10.2	5.1	3.3	3.3
Ca, %	1.25	.91	1.11	1.58	1.58
P, %	.93	.78	.89	1.03	1.10
Glucose, mg/100 ml	276	371	486	628	625
Starch, %	24.9	33.4	43.8	56.6	56.4
Water soluble CHO, %	1.24	.87	.51	.24	.23

^aAnalyses are reported on dry matter basis.

Table 2. Effect of Starter Diet Composition and Type of Medication on Performance

	Treatment		
	Control ^b	Commercial feed ^b	Neo-tetramycin ^c
Number of pigs	102	102	110
Number died			
% mortality ^d	2	8	2
Morbidity ^e number	4	6	2
Average final weight, lbs ^d	57.3	60.5	61.2
Average daily gain, lbs ^d	.94	1.01	1.02
Feed/gain	2.37	2.09	2.23
Feed cost, ¢/lb ^f	8.3	13.3	8.6
Feed cost/lb of gain, ¢ ^g	19.7	27.8	19.2
Pounds produced ^h	5501	5324	6505 ⁱ

^a Avg. initial wt, 15.1 lbs; length of study, 6 weeks.^b Contained 150 g of neomycin.^c Contained 150 g of neomycin and 150 g of terramycin.^d P<.05.^e Defined as number of pigs gaining less than .5 lbs/day.^f Price used as of October 1, 1981.^g Feed cost (¢/lb) multiplied by feed/gain^h Number of pigs started - mortality - morbidity x final weight.ⁱ Adjusted to 102 pigs started.

Table 3. Effect of Starter Diet Treatment on Overall Performance

	Treatment		
	Control	Commercial feed	Neo-tetramycin
No. pigs	47	23	18
Slaughter wt, lbs ^a	209	212	214
Days to market	187	183	183
Weight per day of age ^a	1.12	1.16	1.17
Yield, % ^a	67.0	65.8	65.0

^a Treatment effect (P<.05).