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Effect of Movement and Mixing of Pigs on Performance During the Finishing Period

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EFFECT OF MOVEMENT AND MIXING OF PIGS ON PERFORMANCE DURING THE FINISHING PERIOD

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During the past few years producers have reported that growth rates of pigs plateau or even decline during the finishing period rather than increasing to weights of 200 or 220 pounds as might be expected. The problem, sometimes referred to as "stall out", is often related to enclosed housing but not limited exclusively to this method of housing.

This experiment was one of a series that this station has conducted to study this problem. The objectives were to determine the effects of movement of pigs and also mixing and moving pigs at weights of about 140 pounds on performance to 220 pounds.

Experimental Procedure

Ninety-six crossbred pigs were allotted at a weight of approximately 60 pounds to three management treatments. There were two pens per treatment within each of four replications. Pigs were housed four per pen in an enclosed confinement building that had totally slatted floors. Pens provided 7.1 square feet of floor space per pig. The three management treatments within each replication imposed at approximately 140 pounds were:

Treatment 1 -- Pigs remain in same groups and same pens.
Treatment 2 -- Pigs mixed and moved to different pens.
Treatment 3 -- Pigs moved to different pens but remained in same groups within pens.

Pigs were fed a 16% corn-soybean meal fortified diet for the entire experiment. The composition of the diet is shown in table 1.

TABLE 1. COMPOSITION OF DIET

Ingredient	Percent
Ground yellow corn	76.4
Soybean meal, 44%	21.3
Dicalcium phosphate	1.1
Ground limestone	.7
Trace mineralized salt	.3
Premix[a]	.2

[a]To supply per pound: vitamin A, 1500 IU; vitamin D, 150 IU; vitamin E, 2.5 IU; vitamin K, 1 mg; riboflavin, 1.25 mg; pantothenic acid 5 mg; niacin, 8 mg; choline, 25 mg; vitamin B_{12}, 5 mcg; selenium, .04 mg and aureomycin, 25 milligrams.

Results

A summary of the results of pig performance prior to the management treatments at 140 pounds, performance from 140 to 220 pounds and total performance from 60 to 220 pounds is presented in table 2. There were no significant differences in any period among treatments. Daily gains were quite good during both periods in all treatments and there did not appear to be a "stall out" problem in this experiment. In previous research, increased gains during the finishing period were generally associated with increased feed consumption. In the present experiment, feed consumption during the finishing period was high in all treatments and followed the consumptive trends of the initial feeding period. Actual consumption was 7.14, 6.58 and 6.96 pounds daily for treatments 1, 2 and 3, respectively, during the finishing period. Feed consumption during the finishing period was 147, 146 and 152% of that consumed in period one for treatments 1, 2 and 3, respectively. This indicates that the management treatments did not stimulate additional feed consumption in this experiment.

TABLE 2. EFFECT OF HOUSING MANAGEMENT ON PIG PERFORMANCE[a]

Item	Housing changes at 140 pounds		
	No change	Mixed and moved	Moved
Avg initial wt, lb	62.0	62.3	62.3
Avg wt at change, lb	142.0	140.7	139.0
Avg final wt, lb	220.6	220.3	221.2
Avg daily gain, lb			
60-140 lb	1.73	1.69	1.66
140-220 lb	1.82	1.86	1.81
60-220 lb	1.77	1.77	1.73
Avg daily feed, lb			
60-140 lb	4.86	4.52	4.58
140-220 lb	7.14	6.58	6.96
60-220 lb	5.93	5.51	5.76
Feed/gain			
60-140 lb	2.83	2.67	2.78
140-220 lb	3.92	3.56	3.89
60-220 lb	3.36	3.12	3.35

[a]Four replicates of two pens of four pigs each per treatment.

Summary

This experiment utilized eight pens of four pigs each per treatment to study the effects of movement and mixing at about 140 pounds on pig performance to 220 pounds. Performance was very good in all treatments and there was no significant difference among treatments. Moving or mixing and moving at 140 pounds did not affect rate of gain, feed consumption or feed efficiency during the subsequent period from 140 to 220 pounds.