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Effect of weekly temperature reduction on nursery pig performance

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Abstract

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Keywords

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EFFECT OF WEEKLY TEMPERATURE REDUCTION ON NURSERY PIG PERFORMANCE

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Summary

A total of 64 pigs were used to evaluate the effect of weekly temperature reductions. No differences were observed between treatments for average daily feed intake, daily gain, or feed efficiency. Pigs exposed to cooler temperatures during weeks 3 and 4 tended to consume more feed than those housed at 92 F for the entire period.

Introduction

The weaned pig requires a very warm, draft-free environment. As the pig recovers from the stress of weaning, temperature demands may decrease. This study was conducted to evaluate the effect of weekly temperature reduction on pig performance.

Procedures

Two groups of 32 pigs each were used to evaluate the influence of weekly temperature reductions. Pigs were weaned at 28 days and asssigned to one of two treatments. Pigs were assigned to: 1) a constant temperature of 92° F for 28 days or 2) a temperature regime of week 1, 83°F; week 2, 74°; week 3, 65°; and week 4, 56°.

In both trials, pigs were housed at 92 F for 5 days after weaning. Pigs were then weighed and temperature reduction treatments were imposed for the 28-day feeding period. Pigs were housed in environmentally controlled (continuous light 24 hr/day) rooms (four pigs/pen) with plastic-coated expanded metal floors. All pigs were fed a pelleted milo-soybean meal diet containing 1.25% lysine. Pigs were weighed weekly and gain, feed intake, and feed efficiency were measured.

Results and Discussion

Average daily feed intake, daily gain, and feed efficiency were not affected by weekly temperature reduction (Table 1). Pigs housed at 65 and 56 F tended to consume more feed and have higher feed to gain ratios than control. Average daily gain significantly increased each week. Average daily feed was significantly higher during week 2 than week 1 for both treatment groups. Pigs consumed more feed during week 3 than week 4 at both housing temperatures. Mortality and incidence of scours were similar for all treatment groups.

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Table 1. Effect of Weekly Temperature Reduction on Pig Performance (Trials 1 and 2).

Week and Temperature	Daily Feed Intake (lb)[a]	Average Daily Gain (lb)[a]	F/G
Week 1			
Control (92 F)	.66	.50	1.32
Treatment (83 F)	.62	.44	1.41
Week 2			
Control (92 F)	1.53	.93	1.64
Treatment (74 F)	1.27	.90	1.44
Week 3			
Control (92 F)	1.59	1.02	1.57
Treatment (65 F)	1.83	1.07	1.71
Week 4			
Control (92 F)	2.10	1.25	1.68
Treatment (56 F)	2.41	1.27	1.90
Overall			
Control	1.47	.93	1.55
Treatment	1.53	.92	1.62

[a]Week effect ($P<.05$).