Kansas Agricultural Experiment Station Research Reports

Volume 0
Issue 10 *Swine Day (1968-2014)*

Article 406

1988

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Abstract

Two studies utilizing a total of 480 pigs (21 days old) were conducted to compare wet versus dry feeding during a 4 wk starter period. Pigs were fed a pelletized, high nutrient density diet for the first 2 wk and a semi-complex diet (meal form) for the last 2 wk. AquaÂ® feeders were used in all pens. During the first 2 wk of the study, feeding method had no effect on daily gain or feed intake; however, pigs fed dry diets required less feed per pound of gain than did pigs consuming wet diets (P<.0002). For the overall 4 wk trial, gains and feed intake did not differ between treatments, but pigs fed the wet diets were less efficient than pigs receiving the dry diets. Based on these results, wet feeding is not advantageous to starter pig performance.; Swine Day, Manhattan, KS, November 17, 1988

Keywords

Swine day, 1988; Kansas Agricultural Experiment Station contribution; no. 88-149-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 556; Swine; Starter pig; Wet feeding; Performance

COMPARISON OF WET VERSUS DRY FEEDING FOR STARTER PIGS[1]

R.C. Thaler and J.L. Nelssen

Summary

Two studies utilizing a total of 480 pigs (21 days old) were conducted to compare wet versus dry feeding during a 4 wk starter period. Pigs were fed a pelletized, high nutrient density diet for the first 2 wk and a semi-complex diet (meal form) for the last 2 wk. Aqua® feeders were used in all pens. During the first 2 wk of the study, feeding method had no effect on daily gain or feed intake; however, pigs fed dry diets required less feed per pound of gain than did pigs consuming wet diets (P<.0002). For the overall 4 wk trial, gains and feed intake did not differ between treatments, but pigs fed the wet diets were less efficient than pigs receiving the dry diets. Based on these results, wet feeding is not advantageous to starter pig performance.

(Key Words: Starter Pig, Wet Feeding, Performance.)

Introduction

Previous reports from this station have shown that wet feeding is beneficial to finishing pig performance. Since the starter pig receives a liquid diet prior to weaning, it seems logical that wet feeding would enhance the performance of the early-weaned pig as well. However, little research has been conducted to test this hypothesis. Therefore, the objective of this study was to compare wet feeding (WF) to dry feeding (DF) during the starter phase.

Procedures

A total of 480 starter pigs was utilized in two on-farm trials. Pigs were weaned at approximately 21 days of age and initial weight ranged from 7.2 to 20.5 lb. Pigs were allotted based on initial weight, sex, and ancestry to one of 16 pens in an enviromentally controlled hot-nursery. New Aqua®feeders were placed in all pens, with one feeder serving two pens. In WF pens, the only water was provided by nipple waterers in the feeder. In DF pens, the water line to the feeder was disconnected, and water was provided by a nipple waterer located on the pen wall. The left half of the nursery was assigned to the WF treatment during trial one and switched to the DF treatment in trial two to remove any bias due to location. For the first 2 wk of the study, all pigs were fed a 1.50% lysine pelleted, high nutrient density diet. During the last 2 wk of the study, all pigs received a 1.25% lysine corn-SBM-dried whey diet (meal form). Individual pig weights were obtained weekly on a digital scale sensitive to .1 lb. All feed additions were recorded, and feeders were vacuumed weekly in order to calculate feed intake. Since no trial x treatment interaction existed (P>.05), the data from trials one and two were pooled.

[1]We gratefully acknowledge Keesecker Enterprises, Washington, KS for allowing this study to be conducted on their farm.

Results and Discussion

Results from this study are reported in Table 1. Average daily gain (ADG) and average daily feed intake (ADFI) for the first 2 wk were unaffected by feeding method. However, feed efficiency (F/G) was poorer for pigs fed wet diets than for pigs fed dry diets (P<.0002). There appeared to be a greater amount of feed wastage in the WF pens, which would partially explain some of the difference in F/G. Another factor that may have depressed the feed conversion of pigs on the WF treatment is related to the small size of the young pig's stomach. Gut fill dictates the amount of feed the young pig can consume. Therefore, a pig receiving feed from a wet feeder is consuming a larger percentage of water and a smaller percentage of nutrients than a pig eating dry feed, even though both have the same total volume of digesta in their stomaches. This dilution of nutrient content may also affect feed efficiency.

No differences in ADG, ADFI, or F/G were observed between treatments during weeks 3 and 4 of the study. Also, no differences in ADG or ADFI were observed for the overall 4 wk study. However, pigs on the DF treatment were more efficient for the entire 28 day study than were pigs on the WF treatment (P<.03). This was mainly due to the large difference in F/G observed in the first two weeks.

A qualitative observation in this study was that by 3 days post-weaning, pigs consuming wet feed appeared to have retained more of their initial "bloom". It should be noted, though, that performance for the first week was not enhanced by wet feeding, nor were morbidity or mortality affected by feeding method.

Based on the results of these two trials, wet feeding is not advantageous to starter pig performance and depresses feed efficiency at a time when the pig is consuming the most expensive diets in its entire life cycle.

Table 1. Effect of Wet and Dry Feeding on Pig Performance

Item	WET	DRY	S.E.[a]
Day 0 to 14			
ADG, lb	.50	.50	.020
ADFI, lb	.62	.57	.036
F/G[b]	1.23	1.12	.013
Day 14 to 28			
ADG, lb	.90	.92	.020
ADFI, lb	1.46	1.49	.037
F/G	1.62	1.63	.022
Day 0 to 21			
ADG, lb	.70	.71	.010
ADFI, lb	1.03	1.02	.021
F/G[c]	1.48	1.44	.009

[a]Standard error of the means.
[b]Treatment effect (P<.0002).
[c]Treatment effect (P<.03).