

# Kansas Agricultural Experiment Station Research Reports

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

Article 449

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1989

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### Recommended Citation

Johnston, M E.; Stoner, G R.; and Nelssen, Jim L. (1989) "Effects of a flavoring agent on finishing swine performance," *Kansas Agricultural Experiment Station Research Reports*: Vol. 0: Iss. 10. <https://doi.org/10.4148/2378-5977.6289>

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## Effects of a flavoring agent on finishing swine performance

### Abstract

A finishing study was conducted to evaluate the effect of a commercially available flavoring agent on finishing pig performance. One hundred ninety-two finishing pigs were used in the study. Half the pigs received the finishing diet with added flavor, whereas the other half received the same diet without flavor. There were no differences in average daily gain (ADG) between pigs fed either the flavored or non-flavored feed. However, the pigs receiving flavored feed had significantly higher average daily feed intake for the entire trial. Feed efficiency was better for pigs fed the non-flavored diet than for those fed the flavored diet. These results indicate that the addition of a flavor to finishing pig diets will enhance feed intake with minimal effects on growth performance.; Swine Day, Manhattan, KS, November 16, 1989

### Keywords

Swine day, 1989; Kansas Agricultural Experiment Station contribution; no. 90-163-S; Report of progress (Kansas State University. Agricultural Experiment Station and Cooperative Extension Service); 581; Swine; Finishing pigs; Flavor; Flavoring agent

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## EFFECTS OF A FLAVORING AGENT ON FINISHING SWINE PERFORMANCE<sup>1</sup>

M. E. Johnston, J. L. Nelssen, and G. R. Stoner

### Summary

A finishing study was conducted to evaluate the effect of a commercially available flavoring agent on finishing pig performance. One hundred ninety-two finishing pigs were used in the study. Half the pigs received the finishing diet with added flavor, whereas the other half received the same diet without flavor. There were no differences in average daily gain (ADG) between pigs fed either the flavored or non-flavored feed. However, the pigs receiving flavored feed had significantly higher average daily feed intake for the entire trial. Feed efficiency was better for pigs fed the non-flavored diet than for those fed the flavored diet. These results indicate that the addition of a flavor to finishing pig diets will enhance feed intake with minimal effects on growth performance.

(Key Words: Finishing Pigs, Flavor, Flavoring Agent.)

### Introduction

Moving pigs through a finishing facility quickly and cost effectively is always a concern of swine producers. To obtain maximum benefit from buildings that are expensive to build and maintain, producers need to finish out as many pigs as possible each year. During the finishing phase, many commercial operations experience a "stall out" with their pigs. Although usually short in duration, this is valuable time lost to the producer. One suggested answer to this problem has been the addition of a flavoring agent to the diet to stimulate feed intake. The objective of this study was to evaluate the effect of added flavor in a finishing diet on growth performance.

### Experimental Procedures

A total of 192 crossbred pigs with an initial average weight of 92.3 lb was utilized in this study. Pigs were allotted to pens based on weight, sex, and ancestry and randomly assigned to one of two dietary treatments. Each treatment consisted of eight pens with 12 pigs per pen. Pigs were housed in pens with partially slatted concrete floors in a modified open front building. Feed and water were supplied ad libitum. Pigs on treatment 1 received the finishing diet (Table 1) with the addition of 2 lb/ton of flavor (HOG KRAVE®) added. Treatment 2 pigs received the same diet without added flavoring. Pig weight and feed consumption were collected every 14 d. Criteria measured were average daily gain (ADG), average daily feed intake (ADFI), and feed efficiency (F/G). The trial terminated when average pen weight of pigs was 230 lb.

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<sup>1</sup>We gratefully acknowledge the support of Feed Flavors, Inc., Wheeling, IL.

## Results and Discussion

The addition of a flavoring agent to the diet had no effect ( $P < .19$ ) on ADG of finishing pigs (Table 2). However, there was a numerical improvement (3%) in ADG for pigs fed the flavored diet. The addition of flavor to the finishing diet significantly increased ADFI when compared to the diet without flavor ( $P < .04$ ).

Because of the higher ADFI, feed efficiency tended to be poorer ( $P < .07$ ) for pigs fed the flavored diet. Pigs fed the control diet were 3% more efficient than those pigs fed the flavored feed.

Although the feed flavor stimulated appetite (6.5% increase), which resulted in a slight increase in ADG, it appears that the additional feed was not utilized as efficiently. Differences in composition of gain may be the factor responsible for this poorer feed efficiency; however, carcass criteria were not evaluated.

These data indicate that adding a flavor to finishing pig diets will improve feed intake. However, further research is needed to understand the mechanisms governing feed intake and the subsequent utilization of additional feed by the finishing pig.

**Table 1. Composition of Experimental Diet**

Ingredient	Percentage
Milo <sup>a</sup>	75.85
Soybean meal	20.85
Dicalcium phosphate	1.40
Limestone	.95
Salt	.50
Vitamin premix <sup>b</sup>	.25
Trace mineral premix <sup>c</sup>	.10
Antibiotic <sup>d</sup>	.10
<u>Calculated analysis</u>	
Crude protein	14.0
Lysine	.63
Ca	.65
P	.55

<sup>a</sup>Hog Krave was added at a rate of 2 lb/ton in place of milo.

<sup>b</sup>Each lb of vitamin premix contains: Vitamin A, 1,000,000 IU; vitamin D<sub>3</sub>, 100,000 IU; vitamin E, 4,000 IU; menadione, 400 mg; riboflavin, 1,000 mg; pantothenic acid, 2,500 mg; niacin, 5,500 mg; choline, 100,000 mg; and vitamin B<sub>12</sub>, 5 mg.

<sup>c</sup>Contains 10% Mn, 10% Fe, 10% Zn, 4% Ca, 1% Cu, .4% K, .3% I, .2% Na, and .1% Co.

<sup>d</sup>Chlorotetracycline.

**Table 2. Effect of Flavoring Agent on Finishing Pig Performance<sup>a</sup>**

Item	Flavor	Control
ADG, lb	1.60	1.55
ADFI, lb	5.86 <sup>b</sup>	5.50 <sup>c</sup>
F/G	3.65 <sup>d</sup>	3.54 <sup>e</sup>

<sup>a</sup>A total of 192 finishing pigs, avg initial wt of 92 lb and avg final wt 230 lb. There were eight pens per treatment and 12 pigs per pen. The trial lasted 84 d.

<sup>b</sup>Means with different superscripts differ ( $P < .04$ ).