

# The Effect of Replacing Soybean Meal and Dried Distillers Grains with Corn Gluten Feed in Boer Goat Diets



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## Introduction

- The US meat goat market is rapidly growing with a 211% increase from 2002 to 2017 (NASS, 2002 and 2017).
- Demand is increasing in countries that have the fastest growing populations.
- Minimal research has been done on the effect of corn co-products in small ruminants.

## Objective

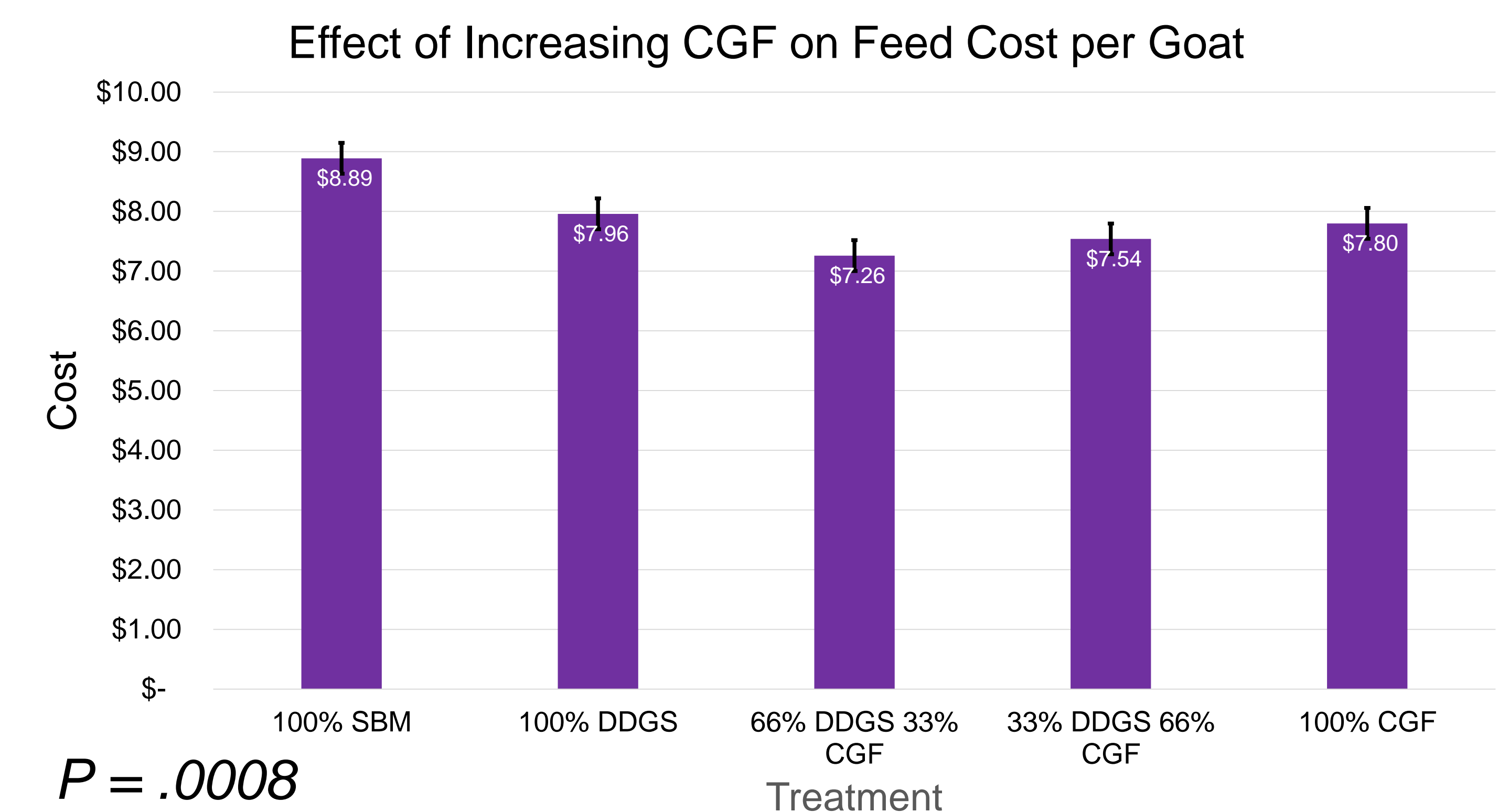
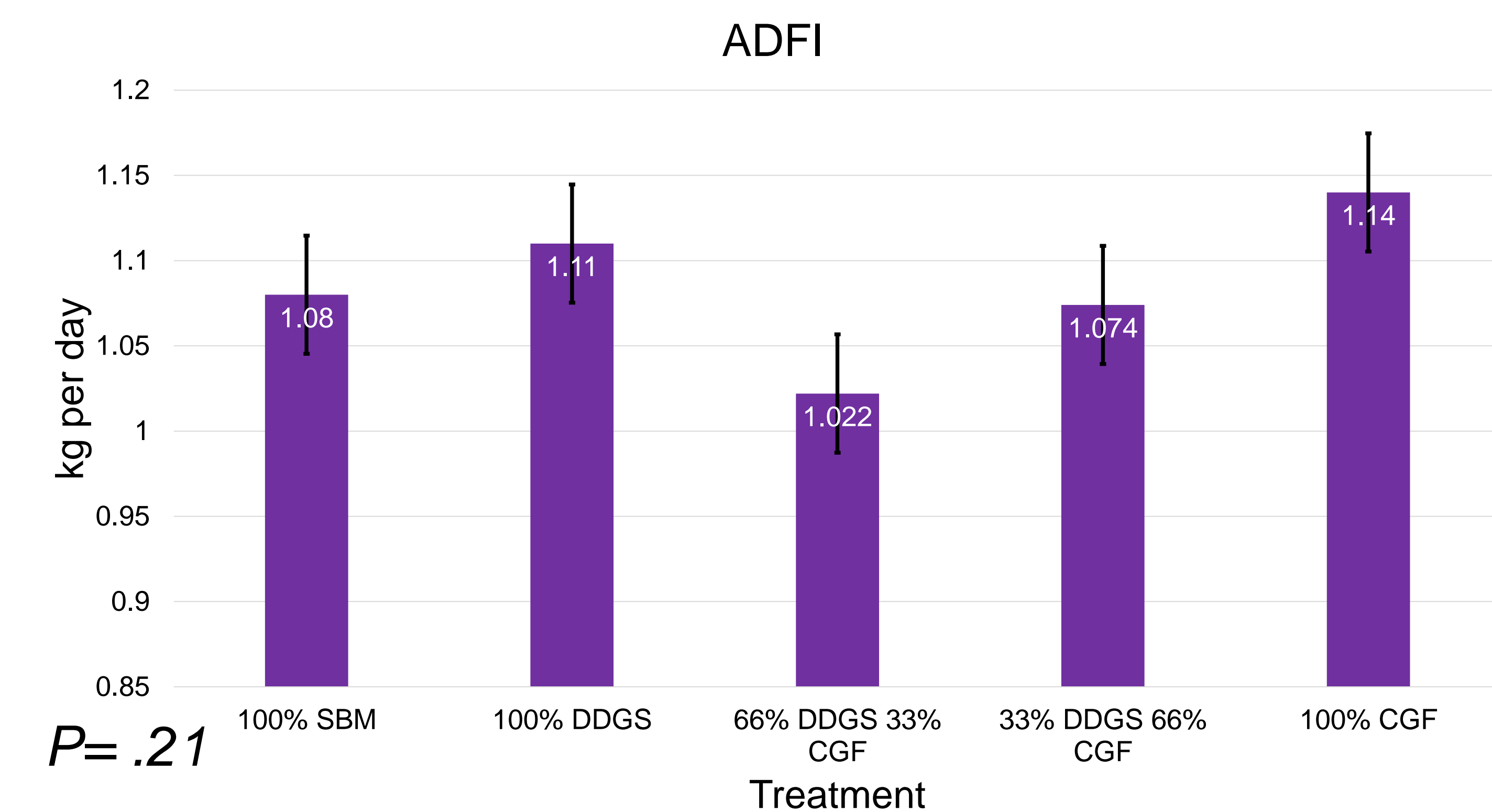
- This experiment was conducted to determine if corn gluten feed (CGF) could replace soybean meal (SBM) and dried distillers grains with solubles (DDGS) as a protein source in Boer-type goat diets.

## Results

- There were no statistical differences between all the measured data except the cost per goat
- Both the cost per goat and ADFI had an increasing quadratic trend in treatments with increasing amounts of corn gluten feed

## Materials and Methods

- 75 Boer-type goats with an approximately 70 d of age with an average weight were housed in pens of 3
- There were 5 treatments, each varying only on the ingredient used for the protein source.
- Completely randomized design
- The treatments were, 1) 100% soybean meal; 2) 100% DDGS/0% CGF; 3) 66% DDGS/33% CGF; 4) 33% DDGS/66% CGF; 5) 0% DDGS/100% CG
- ADG, ADFI, F:G were calculated weekly throughout the 35 d experiment
- Cost per pound of feed and pound of gain were calculated at the end of the experiment using the cost of the feed ingredients as of March 28, 2019
- Analysis was made using the GLIMMIX procedure of SAS



Ingredient	Inclusion In Treatment on % basis				
	A	B	C	D	E
Corn Gluten Feed	0.00%	0.00%	12.63%	25.26%	37.88%
Corn DDGS	0.00%	20.24%	13.49%	6.75%	0.00%
Soybean Meal, 48%	15.01%	0.00%	0.00%	0.00%	0.00%
Corn	42.67%	11.49%	13.65%	15.81%	17.96%
Soybean Hulls	35.74%	62.17%	54.16%	46.15%	38.14%
Molasses	2.50%	2.50%	2.50%	2.50%	2.50%
AmCl	1.00%	1.00%	1.00%	1.00%	1.00%
Limestone	1.58%	1.23%	1.48%	1.73%	1.98%
Salt	0.50%	0.50%	0.50%	0.50%	0.50%
Se Selenite	0.00%	0.00%	0.00%	0.01%	0.01%
Vit A 30,000	0.01%	0.01%	0.01%	0.01%	0.01%
Vit D 30,000	0.00%	0.00%	0.00%	0.00%	0.00%
Vit E 20,000	0.00%	0.00%	0.00%	0.00%	0.00%
Cu Sulfate	0.01%	0.01%	0.01%	0.01%	0.01%
Mono Calcium	0.96%	0.83%	0.55%	0.28%	0.00%

## Conclusions

- Corn gluten feed can replace soybean meal without negative consequences on growth performance
- In maintenance situations corn gluten feed can provide a more inexpensive diet

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