Effects of DDGS and Corn Gluten Feed on the Overall Growth and Economic Cost of Growing Boer Goats

M. E. Northcutt, A.R. Crane, J.L. Lattimer, and C.K. Jones

Department of Animal Sciences and Industry, Kansas State University, Manhattan

Introduction

- In the past 15 years, the United States goat population has grown by over 200%.
- There is very little research that has been conducted on goats, due to the fact that they are not one of the main livestock animals used in the united states, but their prevalence is growing.
- There has been no research on corn gluten feed in the diets of goats until this study.

Objective

To increase our knowledge of corn-co product use in Boer-type goat diets and to find a more economical diet for growing Boer-type goats.

Experimental Procedures

- Our experiment was conducted over 35 days
- We used 75 Boer-type goats (29.6 ± .02 kg, approximately 70 d of age)
- We used a complete randomized design, placing 3 goats/pen
- We used 5 pens per treatment
- The pen was the experimental unit
- Every day goats were examined for overall health, and their water and feed was replenished as needed.
- All feed that was added had to be weighed.
- Every Friday we would weigh each goat, and weigh the feeders to find approximately how much food had been consumed.
- To process our data we used SAS GLIMMIX procedure using a .05 alpha value

Picture credit: Taylor Belle Matheny

Experimental Diets

All diets were isocaloric and isonitrogenous but varied in their protein source.

The 5 diets were:

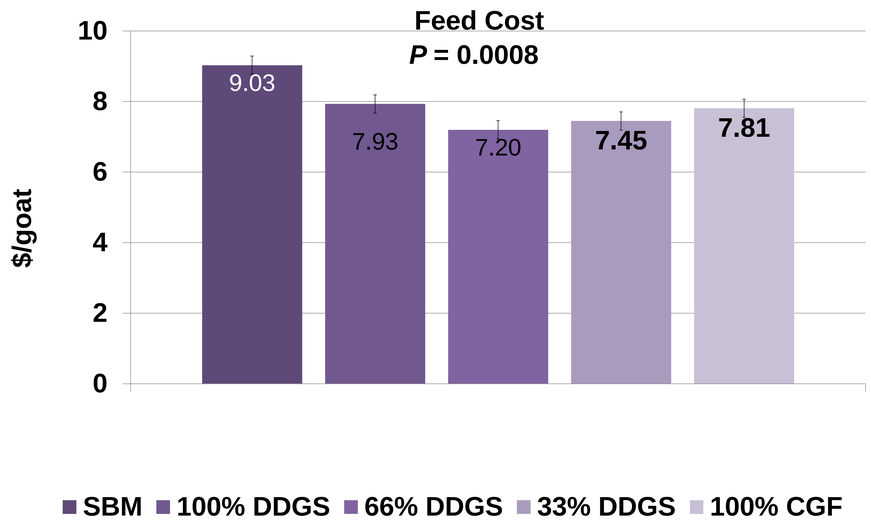
1) 100% SBM (control)
2) 100 % DDGS
3) 66% DDGS/33% CGF
4) 33% DDGS/66% CGF
5) 100% CGF

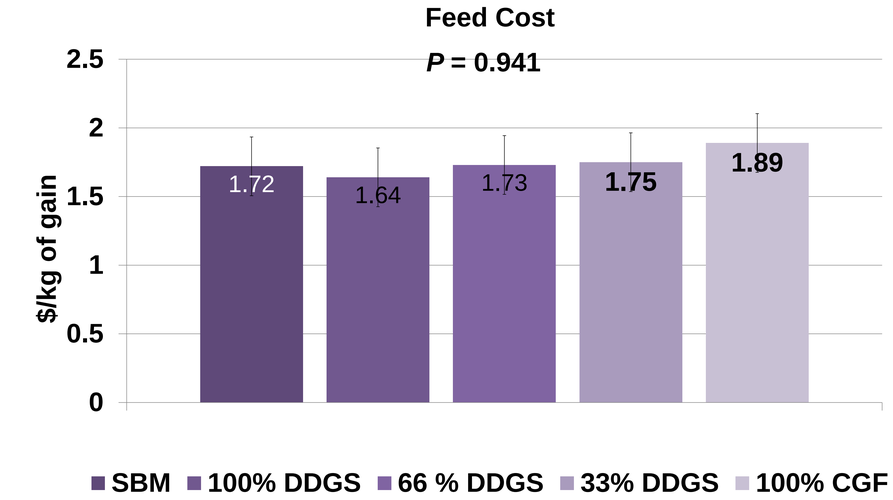
Analyzed Nutrients, % as-fed	SBM Control	100% DDGS/0% CGF	66% DDGS/33% CGF	33% DDGS/66% CGF	0% DDGS/100% CGF
Crude Protein	16.7	17.1	17.2	16.7	17.0
Crude fat	3.10	3.27	2.74	2.36	1.94
ADF	12.0	15.6	27.4	23.8	17.8
Digestible energy, Mcal/dg	3.13	3.16	3.14	3.14	3.15
Ca	1.08	1.07	1.05	1.06	1.06
P	0.55	0.57	0.58	0.55	0.53
S	0.19	0.18	0.24	0.24	0.25

From the table above we can conclude that:

- Crude protein levels were all very similar
- Crude fat decreased, as levels of DDGS decreased
- Levels of calcium and phosphorus were pretty similar in each diet
- Sulfur levels increased with increasing levels of CGF

Results





Conclusions

Using all of the information shown above and more we were able to conclude that the cheapest feed to use was the 66% DDGS/33% CGF. Though this is true, we concluded the cheapest and most efficient feed was actually the 100% DDGS. It is more expensive when looking at $/goat, but when considering $/kg of gain it is the most economical and efficient choice for growing Boer-type goats. Overall, this study proved that CGF and DDGS can be a successful substitution for SBM.

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