

The Impact of Varying Protein Sources on Boer Influenced Goat Growth and Feed Cost

A. R. Mitchell, R. J. Jensen, A. R. Crane, J. L. Lattimer, and C. K. Jones



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

Introduction

- Feed accounts for over 50% of total costs and is the largest expense for farmers
- There is currently very minimal research on the effects of different meat goat diets
- The demand for goat meat is increasing and farmers must be able to choose feed wisely to maximize profit

Objective

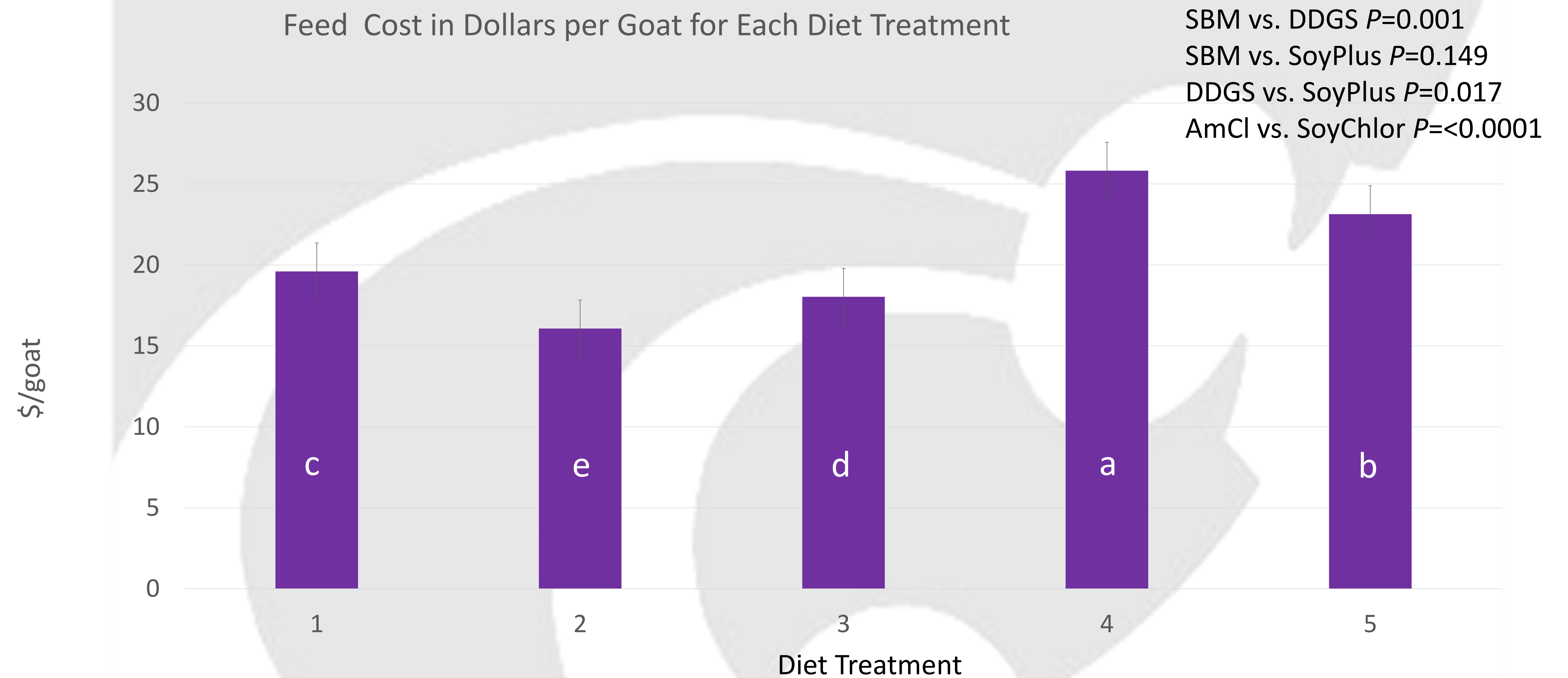
- Evaluate the impact of varying protein and acid sources of feedlot goat growth and carcass traits

Experimental Procedures

- 75 Boer influenced goats around the same age and starting body weight were randomly allocated to a diet.
- Dietary treatments and goats were assigned to pens in a completely randomized design.
- There were 5 pens per treatment and 3 goats per pen.
- The 5 isocaloric and isonitrogenous diet treatments were as followed:
 - 1) 18.7% soybean meal (SBM) and 0.75% ammonium chloride
 - 2) 34.4% distillers' dried grains (DDGS) and 0.75% ammonium chloride
 - 3) 22.0% SoyPlus and 0.75% ammonium chloride
 - 4) 17.2% SBM and 4.83% SoyChlor
 - 5) 20.0% SoyPlus and 4.83% SoyChlor
- Goats were kept on a self-feeder with unlimited access to feed and water for a total of 42 days. Goats were weighed every 7 days
- ADG, ADFI, and G:F were calculated as well as the feed cost for the different treatments using the first and last weigh data (d and d42)
- Carcass Traits were examined at the end of the experiment

Experimental Results

n=	Treatment					SEM	Treatment	P values			
	1	2	3	4	5			SBM vs. DDGS	SDM vs. SoyPlus	DDGS vs. SoyPlus	AmCl vs. SoyChlor
ADG (g/d)	128	134	114	176	156	16.3	0.099	0.378	0.309	0.961	0.013
ADFI (g/d)	2,810	2,780	2,392	3,228	2,804	211.5	0.140	0.367	0.060	0.490	0.081
G:F	0.024	0.0200	0.024	0.024	0.026	0.0022	0.431	0.152	0.653	0.077	0.257
Feed Cost (\$/goat)	19.60 ^c	16.07 ^e	18.03 ^d	25.82 ^a	23.14 ^b	1.412	0.001	0.001	0.149	0.017	<0.0001



Conclusions

- There was no statistical difference ($P>0.05$) for ADG, ADFI, and G:F
- Feed cost in dollars per goat had a statistical difference ($P<0.05$) for all treatments
- The most cost-efficient diet is treatment two, DDGS and ammonium chloride because it is the cheapest and goats will grow the same as more expensive diets

Acknowledgements

- We would like to acknowledge Dairy Nutrition Plus for helping fund this project
- Also, we would like to acknowledge the KSU Sheep and Meat Goat Center and the employees for their assistance