Dried Distillers Grains with Solubles as Effective Replacement of Soybean Meal in Boer Goat Diets

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Introduction

- Dried Distillers Grains with Solubles (DDGS) may be an effective replacement of Soybean Meal (SBM) in Boer Goat Diets
- The global goat population is growing and DDGS could be a cost effective alternative.
- DDGS is cheaper than SBM in volume and per protein unit cost
- With the per protein unit cost advantage of DDGS over SBM being $1.86, DDGS would price into goat diets as a protein source (October 26, 2017 U.S. Grains Council Report)
- There has been no peer reviewed research done on DDGS in Boer goat diets

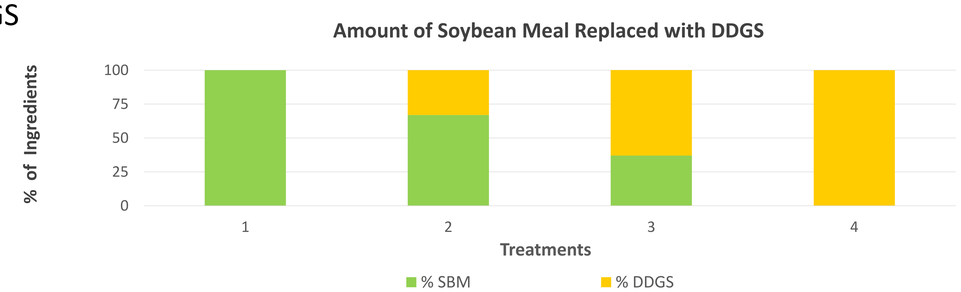
	Inclusion, %					Cost, $/ton			
Ingredient	Cost/lb	Trt 1	Trt 2	Trt 3	Trt 4	Trt 1	Trt 2	Trt 3	Trt 4
Corn DDGS	$0.05	-	10.3	20.5	31.05	-	9.79	19.48	29.5
Soybean Meal, 48%	$0.20	15.45	10.26	5.12	-	63.34	42.07	21.01	-
Corn DDGS	$0.06	52.75	51.17	49.61	48.31	68.2	66.16	64.14	62.46
Soybean Hulls	$0.06	25.93	22.61	19.31	15.04	32.41	28.26	24.14	18.8
						$163.95			$110.76

Objective

The objective of this experiment was to evaluate the efficacy of DDGS as replacement of SBM in Boer goat diet

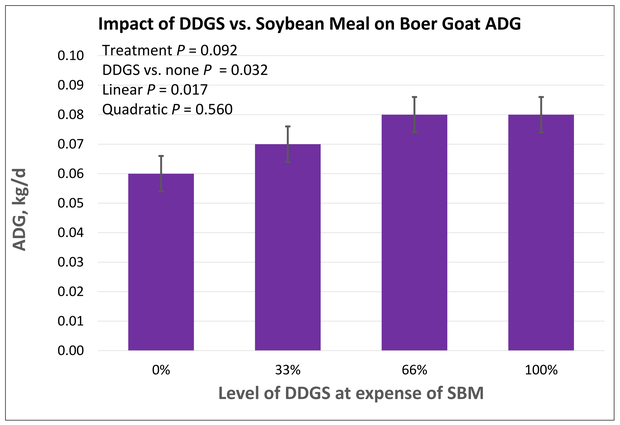
Methods

- Forty-eight meat goat kids (approximately 70 d of age) were used in a completely randomized design
- There were 3 kids per pen (4 pens per treatment)
- Kids were allotted into one of four experimental diets: 1) 0% SBM replaced by DDGS; 2) 33% SBM replaced by DDGS; 3) 66% SBM replaced by DDGS; and 4) 100% SBM replaced by DDGS

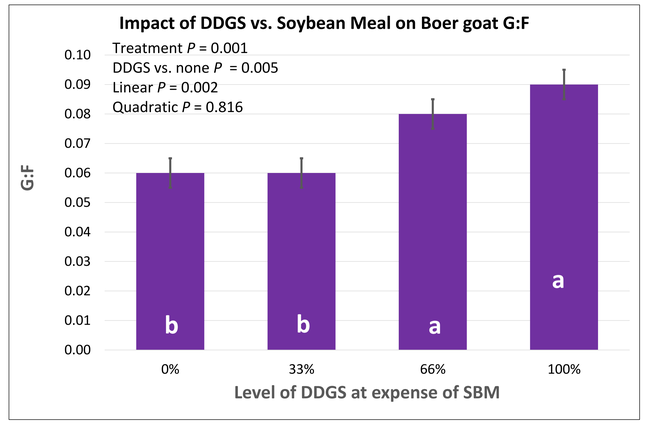


- All diets were pelleted with pellets containing roughage
- All diets were formulated to the same nutritional value
- Diets were fed for 47 days ADG, ADFI, and G:F calculated every week
- Data was analyzed using the GLIMMIX procedure of with pen serving as the experimental unit. The model included effects of the level of DDGS with P-value ≤ 0.05 considered significant. LS Means was utilized to partition treatment differences (P < 0.05)

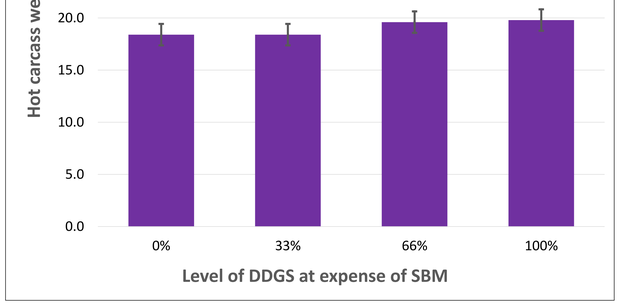
Results



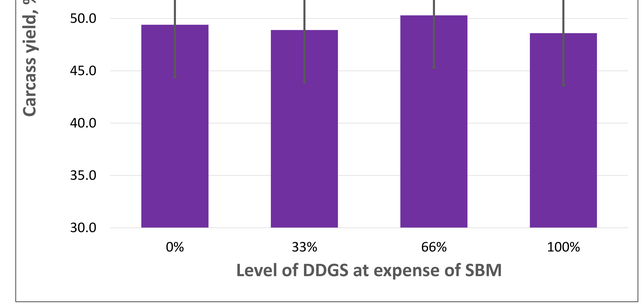
SEM: $P = 0.006$



SEM: $P = 0.005$



SEM: $P = 1.03$



SEM: $P = 0.79$

Summary and Conclusion

- DDGS did not have an overall treatment effect on ADG, HCW, or Carcass Yield %
- Feed efficiency improved with the addition of DDGS to the diet for treatments 66% and 100% SBM inclusion of DDGS
- There was relatively no differences whether fed DDGS or SBM, with a minor improvement of G:F with DDGS
- These findings suggest that DDGS are an effective replacement of soybean meal in Boer goat diets

Acknowledgements

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