Evaluate the Efficacy of Dried Distillers Grains with Solubles as a Replacement for Soybean Meal in a Boer Goat Diet

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Introduction

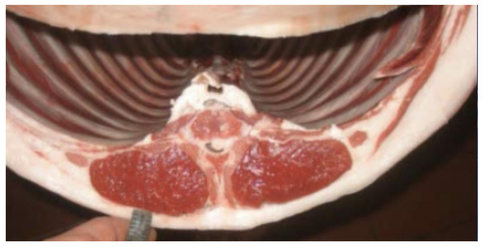
- Meat goat consumption is popular around the world which increases the need for alternative feeds for goats.
- Dried distillers grains with solubles (DDGS) are cheaper on a per ton basis than soybean meal (SBM).
- The ethanol manufacturing companies use 60% of the seed for humans and the rest can be used for DDGS in animal diets.

Objective

Evaluate the efficacy of DDGS as a replacement for SBM in a Boer goat diet.

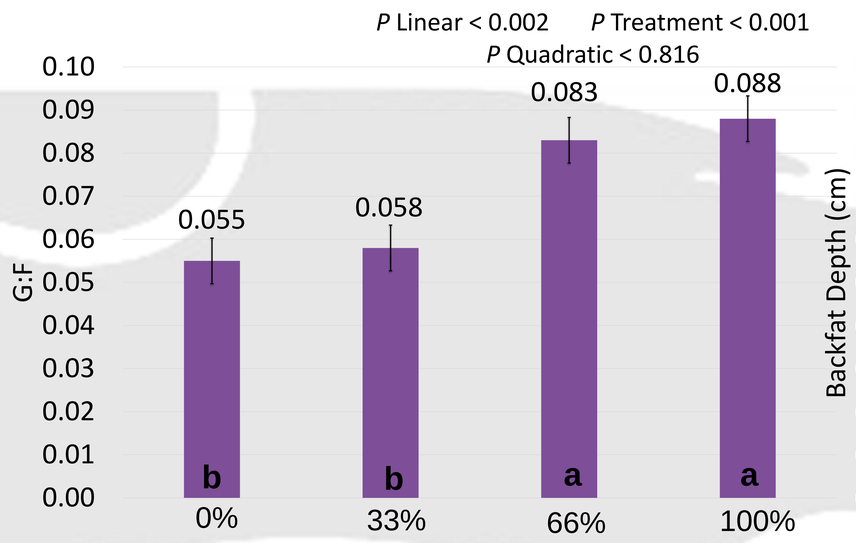
Methods and Materials

- 48 Boer goat kids averaging 28.4 kg and approximately 70 d age were randomly assigned one of the following diets: 0%, 33%, 66% or 100% SBM replaced by DDGS.
- Four treatments were used with four replicates of each treatment.
- A step-up period for fourteen days allowed for accumulation of diets and similar initial weights.
- Weekly, weights for both goats and feeders were collected for BW, ADG, ADFI, and G:F.
- At 47 d two goats from every pen were sent to slaughter for carcass data measurements.

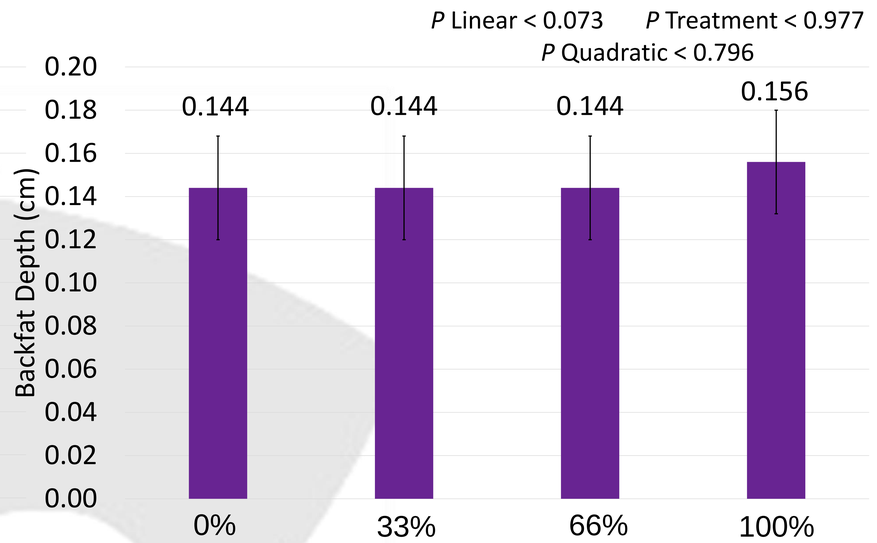


Experimental Period Results

Overall Gain to Feed Efficiency



Average Backfat Depth



Diets for SBM and DDGS

Ingredient	Cost/lb	Inclusion %				Cost, $/ton			
		Trt 1	Trt 2	Trt 3	Trt 4	Trt 1	Trt 2	Trt 3	Trt 4
Corn DDGS	$0.06	0.00	10.30	20.50	31.05	-	$9.79	$19.48	$29.50
Soybean Meal, 48%	$0.20	15.45	10.26	5.12	0.00	$63.34	$42.07	$21.01	-
Corn	$0.06	52.75	51.17	49.61	48.31	$68.20	$66.16	$64.14	$62.46
Soybean Hulls	$0.06	25.93	22.61	19.31	15.04	$32.41	$28.26	$24.14	$18.80
Molasses	$0.02	2.50	2.50	2.50	2.50	$0.75	$0.75	$0.75	$0.75
Ammonium Chloride	$0.04	0.75	0.75	0.75	0.75	$0.60	$0.60	$0.60	$0.60
Limestone	$0.02	1.60	1.60	1.59	1.79	$0.64	$0.64	$0.64	$0.72
Salt	$0.04	0.50	0.50	0.50	0.50	$0.35	$0.35	$0.35	$0.35
Copper Sulfate	$1.10	0.00	0.00	0.00	0.00	$0.10	$0.08	$0.05	$0.03
Vit A 30,000	$0.10	0.04	0.04	0.04	0.04	$0.07	$0.07	$0.07	$0.07
Vit D 30,000	$0.10	0.01	0.01	0.01	0.01	$0.02	$0.02	$0.02	$0.02
Zn Oxide	$0.81	0.01	0.01	0.00	0.00	$0.16	$0.11	$0.05	-
Mono Calcium P	0.32	0.45	0.25	0.05	0.00	$2.89	$1.16	$0.35	-
Total	-	100.00	100.00	100.00	100.00	**$169.54**	**$150.51**	**$131.66**	**$113.31**
		Nutrients, %							
Crude Protein		16.0	16.0	16.0	16.0				
Crude Fat		2.5	3.3	3.8	4.8				
Crude Fiber		9.8	9.8	8.6	8.4				
Digestible energy, Mcal/lb		1.5	1.5	1.5	1.5				
Ca, %		1.0	1.0	1.0	1.0				
P, %		0.4	0.4	0.4	0.4				

Table 1. Ingredient percentages and costs for both SBM and DDGS diets.

Conclusions

- Replacing SBM with increasing levels of DDGS led to no significant impact on ADG, ADFI, or carcass measurements.
- There is a positive impact on G:F for levels 66% and 100% SMB replaced by DDGS
- From 0% to 100% SBM replaced by DDGS there was a 1 pound increase in HCW.
- DDGS can be an alternative diet for meat goats.
- By using 100% SBM replaced by DDGS, the producer saves an overall $53.23/ton difference.

Acknowledgments

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