Use of Dried Distillers Grains with Soluables (DDGS) for incremental replacement of Soybean Meal (SBM) in a Boer goat diet.

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Introduction

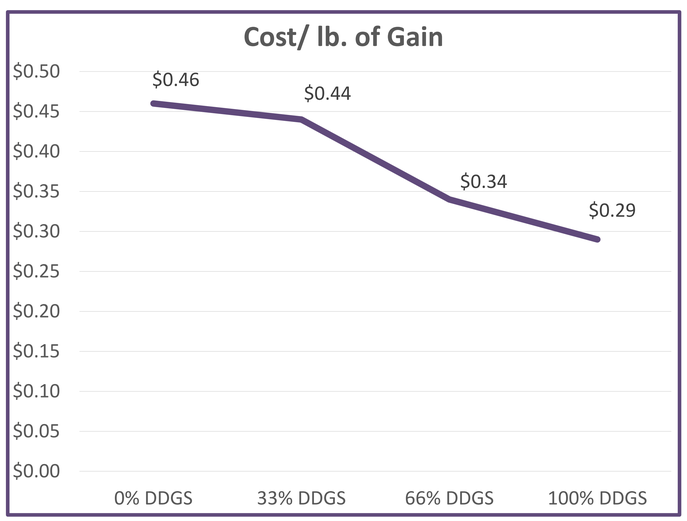
- DDGS is a co-product of ethanol manufacturing and highly available in the Midwest.
- There is a 17% savings when purchasing DDGS instead of SBM, a $27.27 per ton difference.
- When feeding DDGS you must increase calcium and reduce phosphorus.
- Goats must be monitored closely for common health concerns such as, urinary calculi, polioencephalomalacia and pneumonia.

Objective

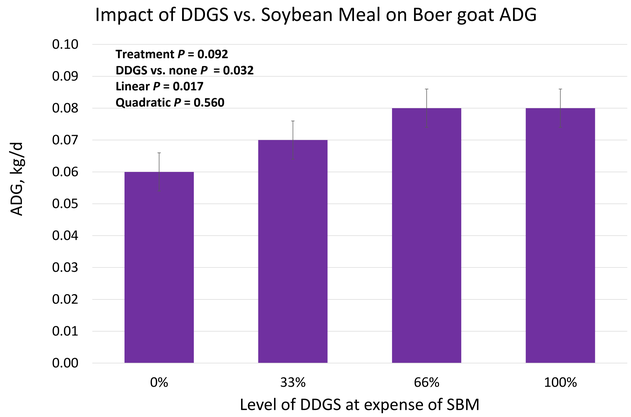
Evaluate the efficacy of DDGS as a replacement for SBM (SBM) in a Boer goat diet.

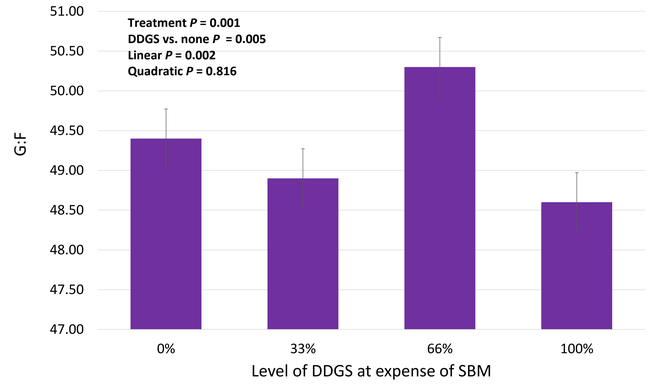
Methods

- 48 meat goat kids (approximately 70 d of age) were housed with 3 kids per pen (4 pens per treatment) at the Kansas State University Meat Goat Center.
- 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.
- Corn or co-products resulted in 75-84.5% of complete ration.
- Diets were pelleted, containing roughage, so no supplemental forage would be needed.
- Diets were fed for 47 days, with a 14 day step-up period.
- Goats and feeders were weighed weekly, ADG, ADFI, and G:F were calculated.
- Two kids per pen were slaughtered with carcass data collected, including hot carcass weight, yield, loin eye area, and fat depth at the 13th rib.
- Growth and carcass results were analyzed and economics applied to determine overall cost of gain. Data was analyzed using the GLIMMIX procedure of SAS (SAS Inst., Cary, NC) with pen serving as the experimental unit.



Results





DDGS inclusion in place of SBM, %							DDGS vs		
	0%	33%	66%	100%	SEM	Treatment	none	Linear	Quadratic
AVG. BW, kg									
d 0	28.2	28.2	28.2	28.4	.96	.999	.994	.932	.908
d 7	29.4	29.7	29.2	29.9	1.13	.974	.915	.865	.837
d 14	29.8	30.6	30.8	31.4	1.0	.714	.339	.272	.942
d 21	32.5	32.7	33.2	33.8	1.1	.836	.569	.385	.850
d 28	34.0	34.6	35.2	36.1	1.2	.650	.355	.220	.935
d 35	35.5	36.1	36.8	37.7	1.2	.613	.343	.198	.909
d 42	35.5	37.0	38.0	38.7	1.4	.473	.182	.133	.793
d 47	37.1	38.4	38.8	40.4	1.4	.445	.210	.123	.937

Summary and Conclusion

- There were no statistical differences between the treatments for BW, ADG, ADFI, or carcass data. There was a linear increase of G:F in goats fed 66% and 100% DDGS compared to those with a lesser amount.
- In summary, there was no detrimental effects caused by replacing SBM with DDGS at any level of replacement. This conclusion shows that it may be cost effective to replace SBM with DDGS. To find additional effects, it would be necessary to use more Boer goats in the following studies.

Acknowledgements

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