

Effect of replacing soybean meal with dried distiller's grains with solubles in Boer goat diets

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Introduction

- Internationally, the meat goat population has increased approximately one hundred million over ten years.(FAOSTAT 2002 and 2012).
- There is very little research on goat nutrition for maximum growth performance at current.
- An ethanol byproduct known as dried distiller's grains with solubles (DDGS) is a more cost effective feed than soy bean meal(SBM) by \$1.86 per protein unit(October 26,2017 U.S. Grains Council Report)
- Research over DDGS in small ruminants has been conducted in sheep, where, DDGS had no effect on carcass traits(Crane et. al.,2017).
- However, no peer reviewed DDGS research has been conducted in goats.

Objective

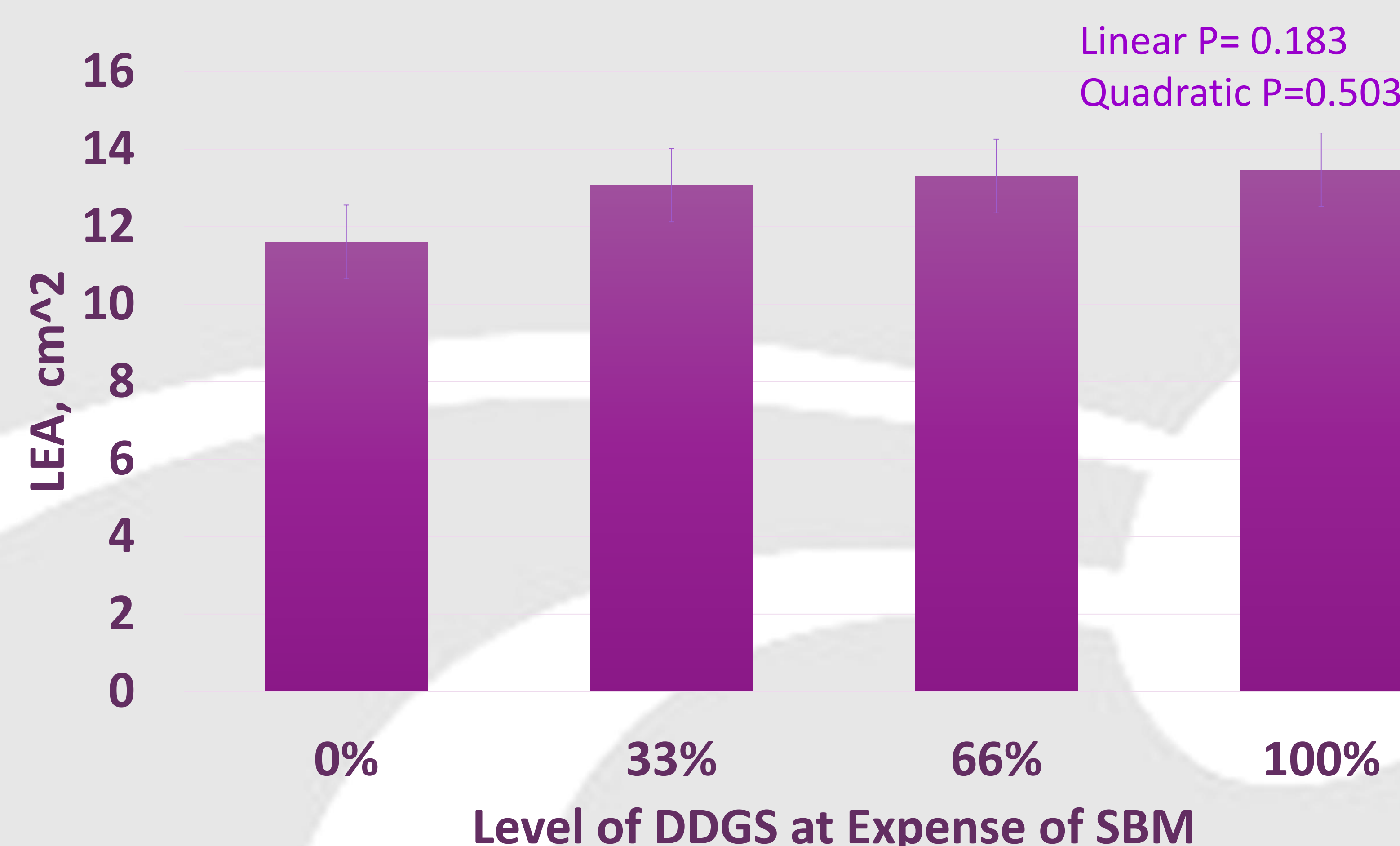
- To evaluate the effects of substituting SBM with DDGS in increasing amounts on growth performance and carcass characteristics.

Experimental Procedures

- 48 Boer goats(approximately 70 d age), were collected for this experiment
- After a 14 day step up period, the goats were allotted to one of four treatments, 3 goats per pen, 4 pens per treatment, in a completely randomized design.
- Treatments consisted of increasing percentages of DDGS replacing SBM: 1) 0% DDGS, 2) 33% DDGS, 3) 66% DDGS, 4) 100% DDGS.
- ADG, ADFI, and GF ratio was calculated every two weeks over the 47 day period.
- Growth performance and Carcass criteria measured included: ADG, ADFI, GF ratio, HCW, and % carcass yield.



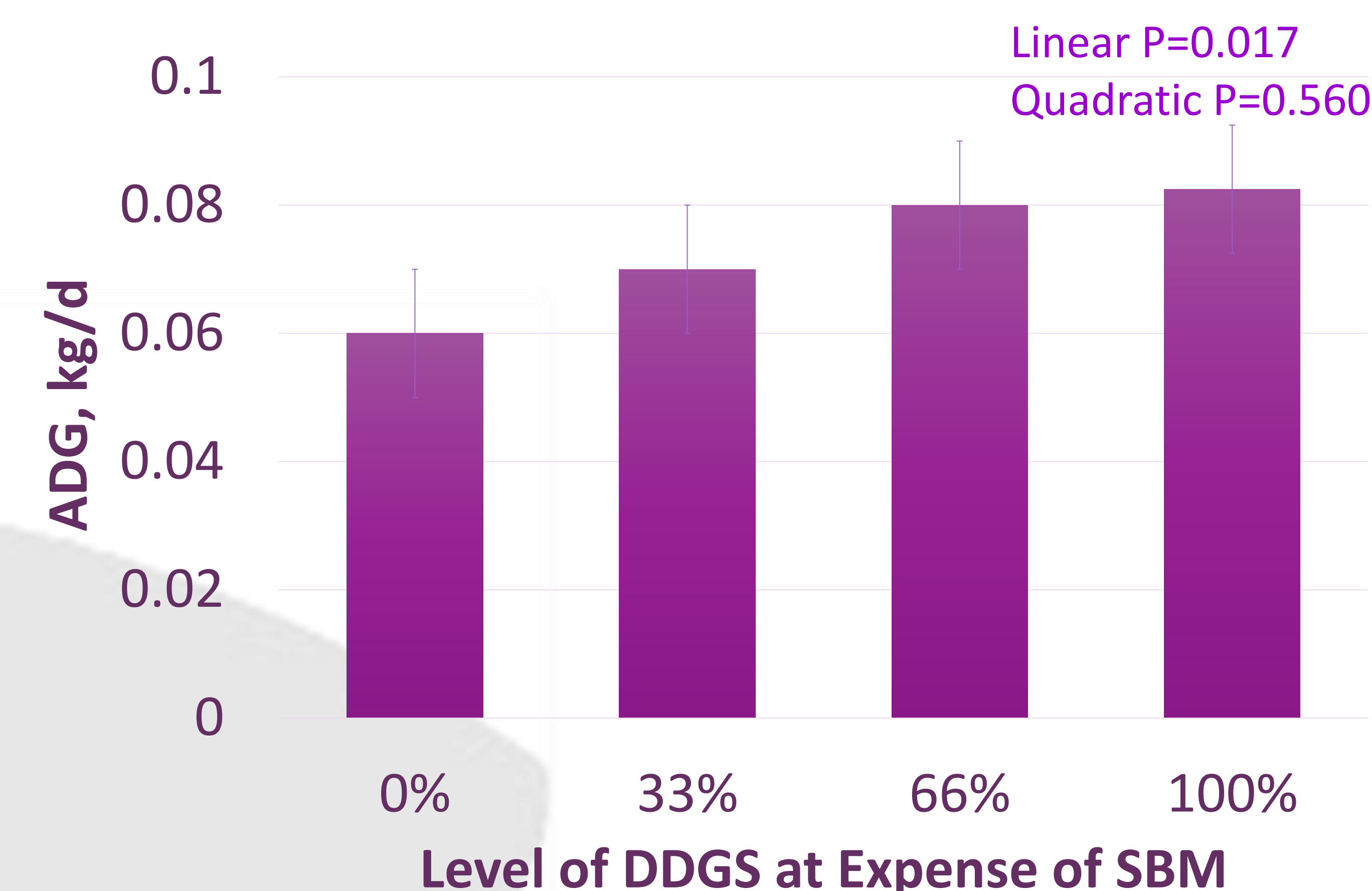
Average Loin Eye Area



Conclusions

- Replacing SBM with DDGS had no significant effect on ADG, ADFI, HCW, LEA, or % carcass yield.
- DDGS is a cost effective feed stuff replacement for SBM in goats.
- Up to 100% SBM replaced with DDGS can be fed without impacting the characteristics studied.

D 0-56 Average Daily Gain



References

- Crane, A R, et al. "Effects of Dried Distiller's Grains on Lasalocid Inclusion on Feedlot Lamb Growth." Journal of Animal Science, vol. 95, no. 7, July 2017.
- "Livestock Primary: Meat Indigenous, Goat." FAOSTAT, 2002.
- "Livestock Primary: Meat Indigenous, Goat." FAOSTAT, 2012.
- "DDGS Weekly Market Report- October 26, 2017." U.S. GRAINS COUNCIL, October 2017.

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