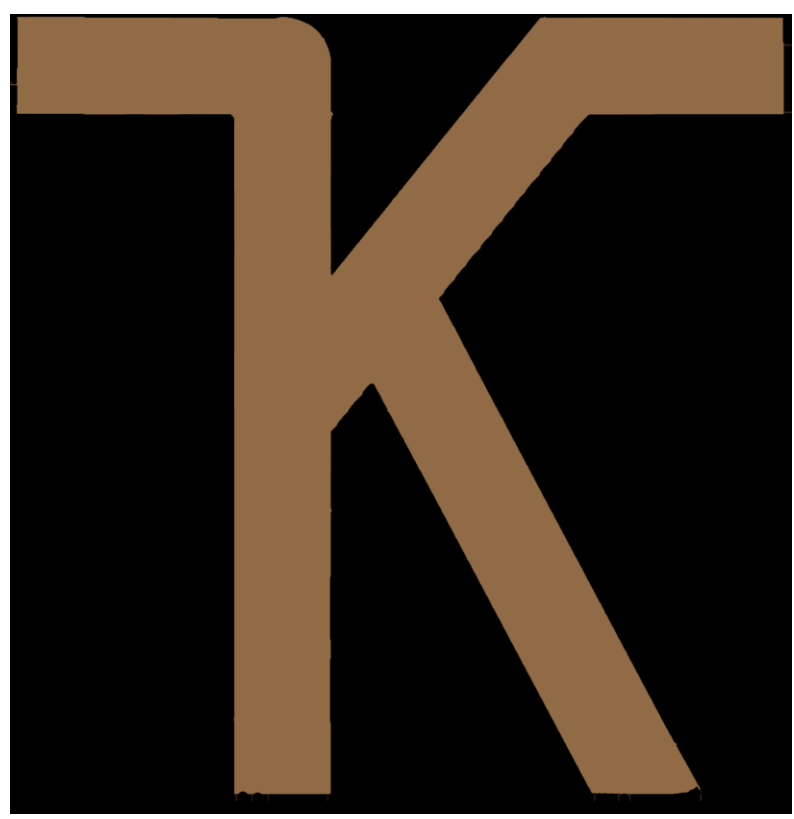




# Effects Of Soybean Meal Replacement With Dried Distillers Grains On Boer Goat Growth Performance

Madison Beauchamp\*, Alison Crane, James Lattimer, and Cassandra Jones



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

## Introduction

- Distiller's dried grains with solubles (DDGS) are the nutrient rich co-product of dry-milled ethanol production.
- Generally, corn DDGS contains approximately 29% crude protein, 10% fat, 9% crude fiber and 5% ash resulting in 1.8 times greater protein value than soybean meal.
- DDGS is valued at \$3.80/bushel while soybean is valued at \$7.03 creating an opportunity for a less expensive soybean meal alternative.
- The global goat population has increased by 34% in the last 10 years with goats becoming a valued agricultural resource because of their efficiency in feed conversion, and hardy nature.
- While research has been carried out with respect to the other meat producing species, there is currently no research provided in relation to goats being fed a diet of DDGS.
- With these two aspects combined replacing soybean meal with dried distillers grains in a growing goats diet could save producers an average of \$7.70/head.

## Objective

To evaluate the efficacy of corn dried distillers grains with the solubles as a replacement for soybean meal in a Boer goat diet.

## Methods

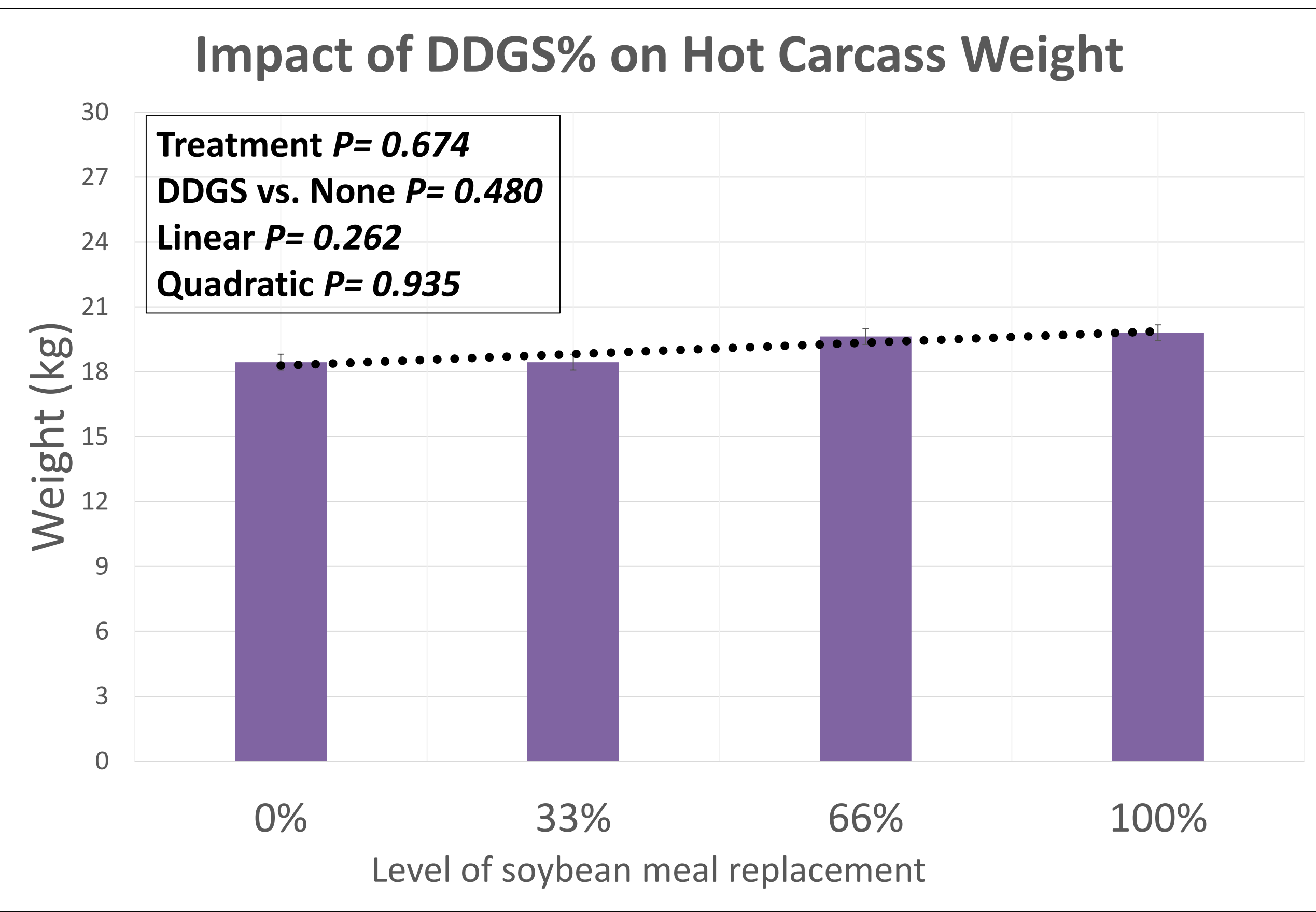
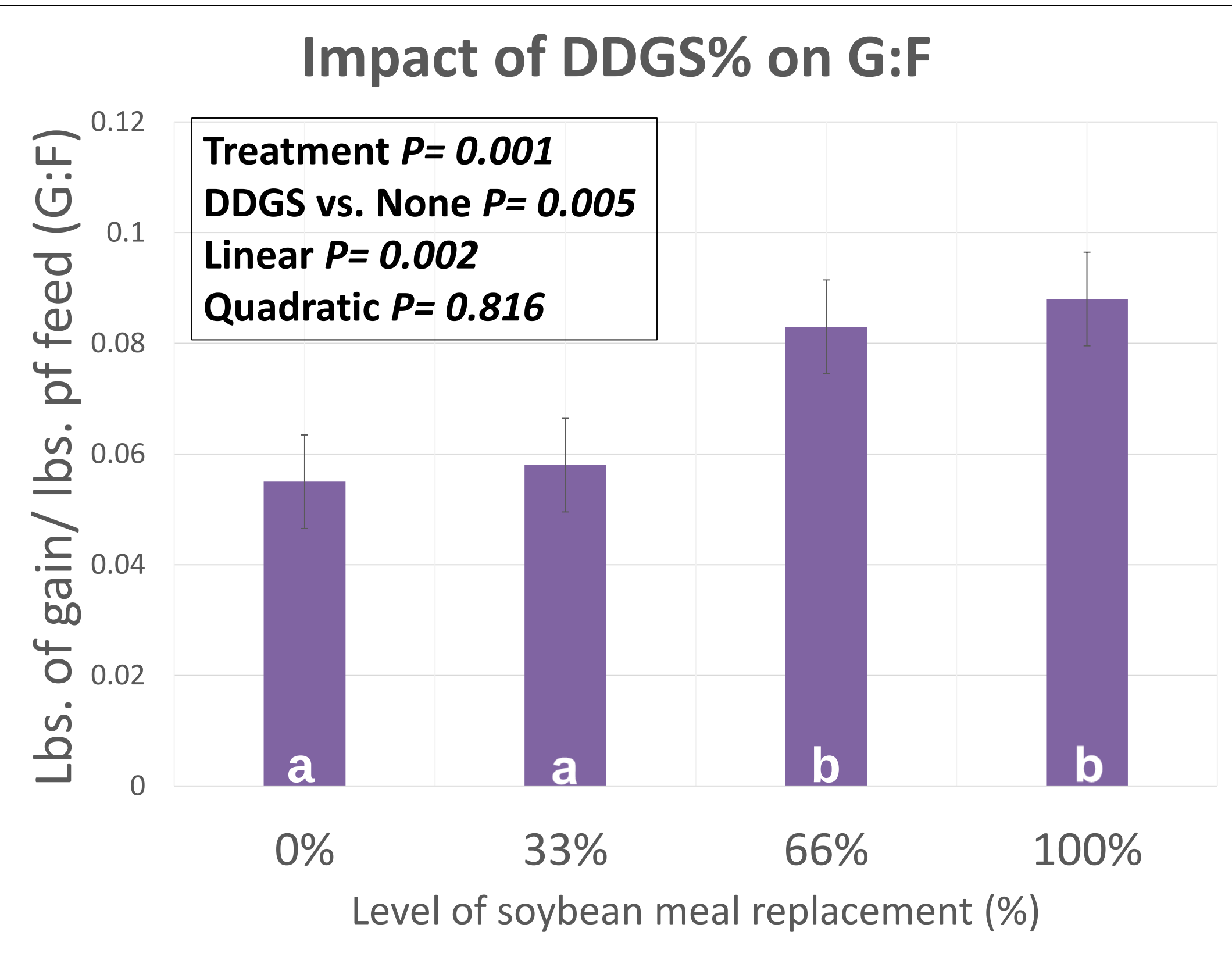
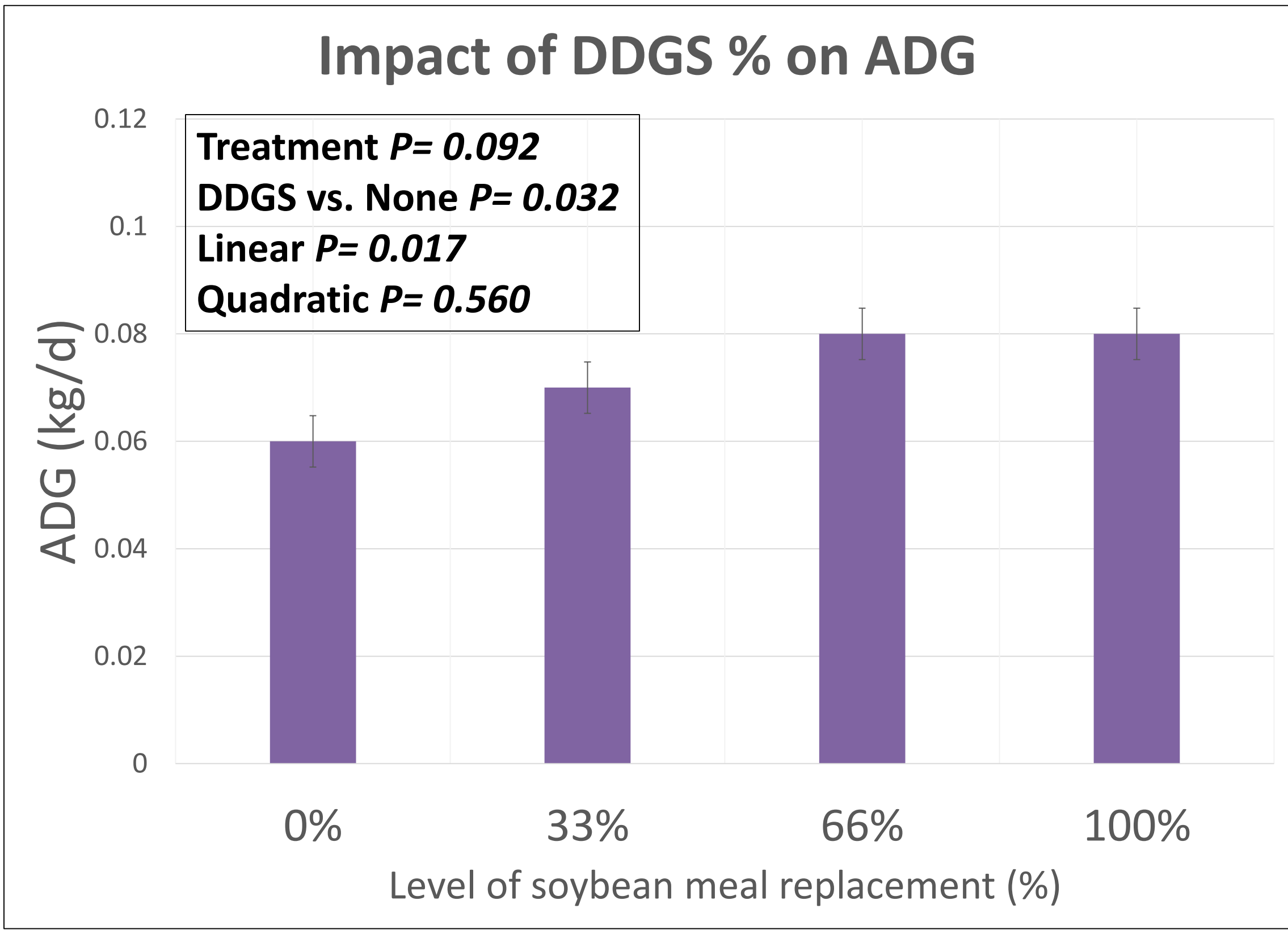
- 48 Boer goat kids were separated into 16 pens with 3 kids/pen
- 4 treatments were fed with 4 pens/treatment (All feed was formulated to be both isocaloric and isonitrogenous)
  - 0% SBM replaced by DDGS
  - 33% SBM replaced by DDGS
  - 66% SBM replaced by DDGS
  - 100% SBM replaced by DDGS
- A step up period of 21 days was used to help with palatability and acclimation of the rumen.
- Feed added was tracked every morning and evening, and feeder weights were weighed once a week, being sure to account for the 2 lbs. of the feeder.
- Each goat was weighed every 7 days, and pen weights were calculated.
- At the end of the 47 day experiment (not including the step up period) the measurements were used to calculate feed disappearance, ADG, ADFI, and F:G.
- To measure carcass characteristics 2 out of 3 goats from each pen were randomly selected and humanely slaughtered.
- From the carcasses processed hot carcass weight, carcass yield, loin eye area, loin eye depth, backfat depth, and body wall thickness were all recorded.



Because of the concentrated phosphorus levels in DDGS goats were heavily monitored for signs of feedlot polio and water belly. Kids will be supplemented with 140 mg/hd/d of thiamin to offset any potential symptoms. Fresh water was provided at all times to ensure healthy and happy goats.



## Results



## Summary and Conclusion

- In conclusion dried distillers grains with solubles can provide a cost effective replacement for soybean meal in a growing Boer goat diet.
- DDGS vs. no added DDGS statistically impacted the ADG of a Boer goat, and when looking at G:F two clear categories arose proving advantages of inclusion of DDGS at 66% and 100% replacement of SBM.
- No side effects or high rate of health problems were seen when using the more concentrated feed.
- Even though statistically insignificant biologically relevant trends began to appear when looking at the hot carcass weights of the goats, and with more research and the possibility of more goats being utilized in a different experiment, this data is expected to be statistically significant when using a higher power.

## Acknowledgements

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