

Impact of titrating levels of dried distillers grains with solubles as a replacement of soybean meal on Boer goat fatty acid profiles

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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).
- Carcass characteristic and in particular fatty acid profiles knowledge is minimal for meat goats fed titrating levels of DDGS.

Objective

Evaluate the impact of titrating levels of DDGS as a replacement of SBM on Boer goat fatty acid profiles

Methods and Materials

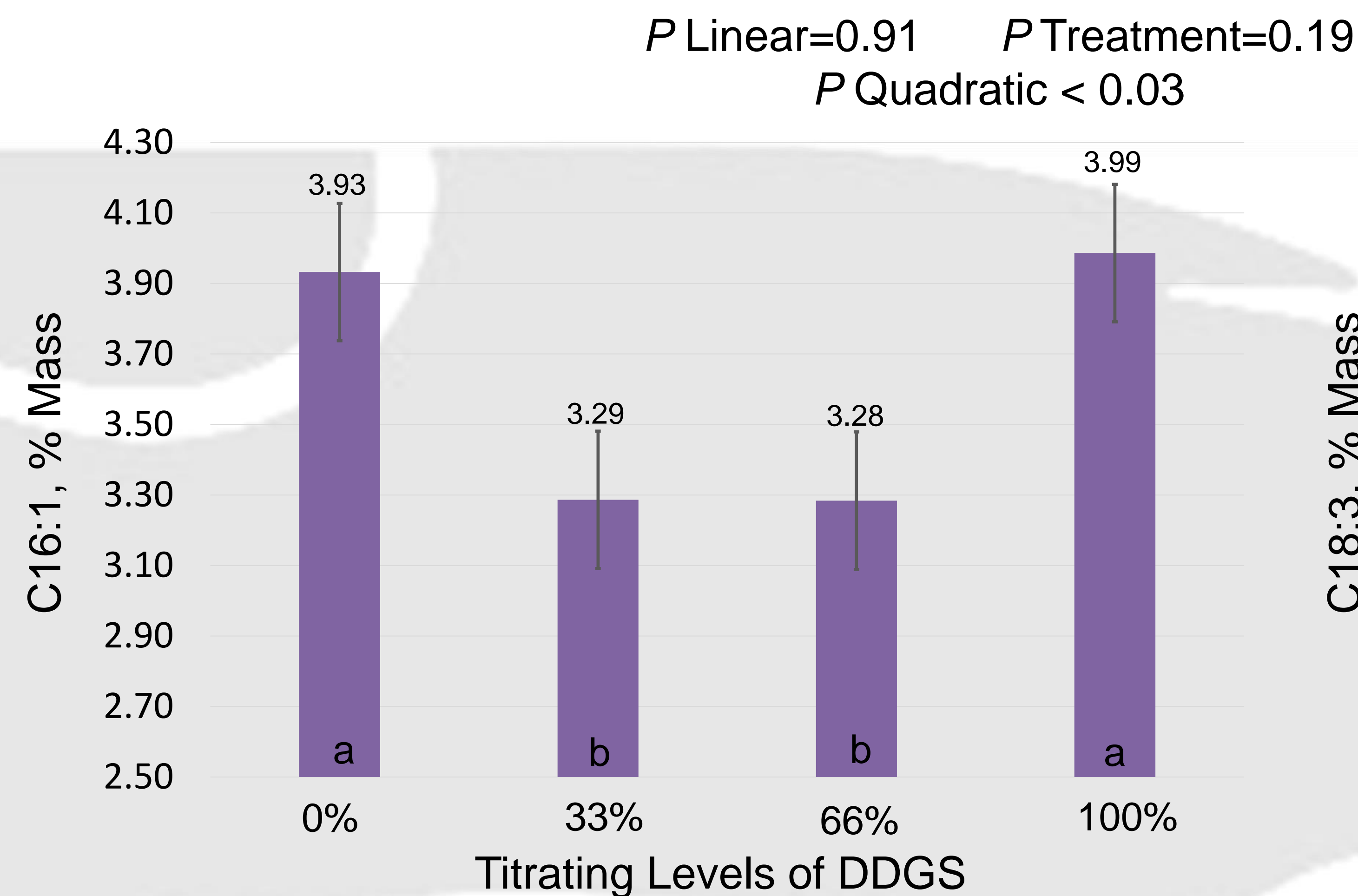
- 48 Boer goat kids averaging 28.4 kg and approximately 70 d age were randomly assigned one of the following diets: 0%, 33%, 66% or 100% SBM replaced by DDGS.
- Four treatments were used with four replicates of each treatment.
- A step-up period for fourteen days allowed for accumulation of diets and similar initial weights.
- At 47 d two goats from every pen were sent to slaughter for carcass data measurements.
- In a USDA-inspected facility, backfat samples were collected between the 12th and 13th rib. Samples were analyzed for Fatty Acid Profiles.

Treatment Least Square Means

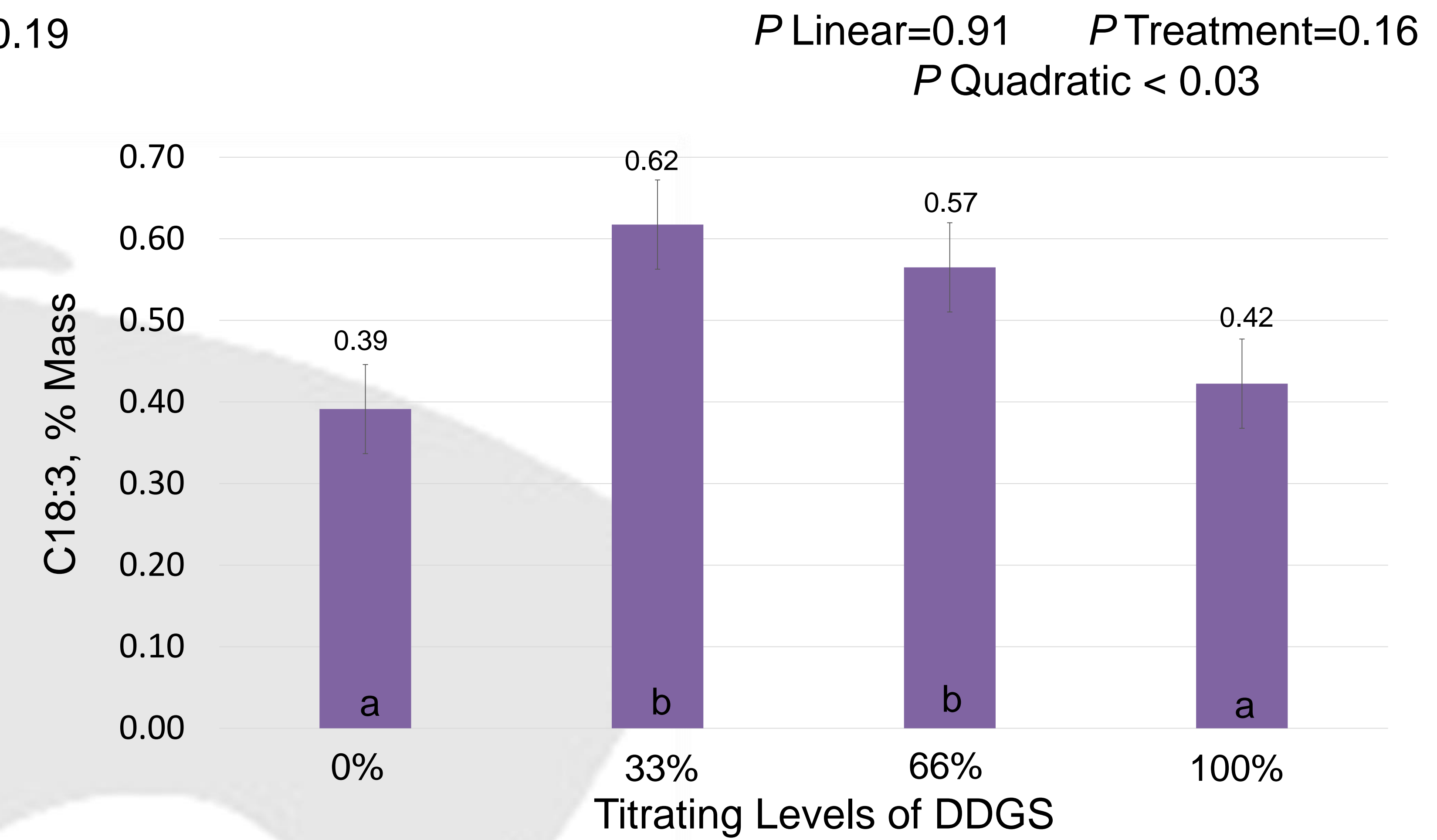
Fatty Acid, % weight	0%	33%	66%	100%
N3n6 Ratio	0.119	0.138	0.146	0.127
Saturated	34.531	34.603	34.240	33.526
Unsaturated	59.480	59.821	58.425	60.208
Saturated vs. Unsaturated Ratio	0.584	0.586	0.587	0.558
Polyunsaturated	3.984	4.561	5.065	4.2662
Monounsaturated	55.496	55.260	55.376	55.941
Iodine Value	50.564	52.168	50.786	51.971

Experimental Period Results

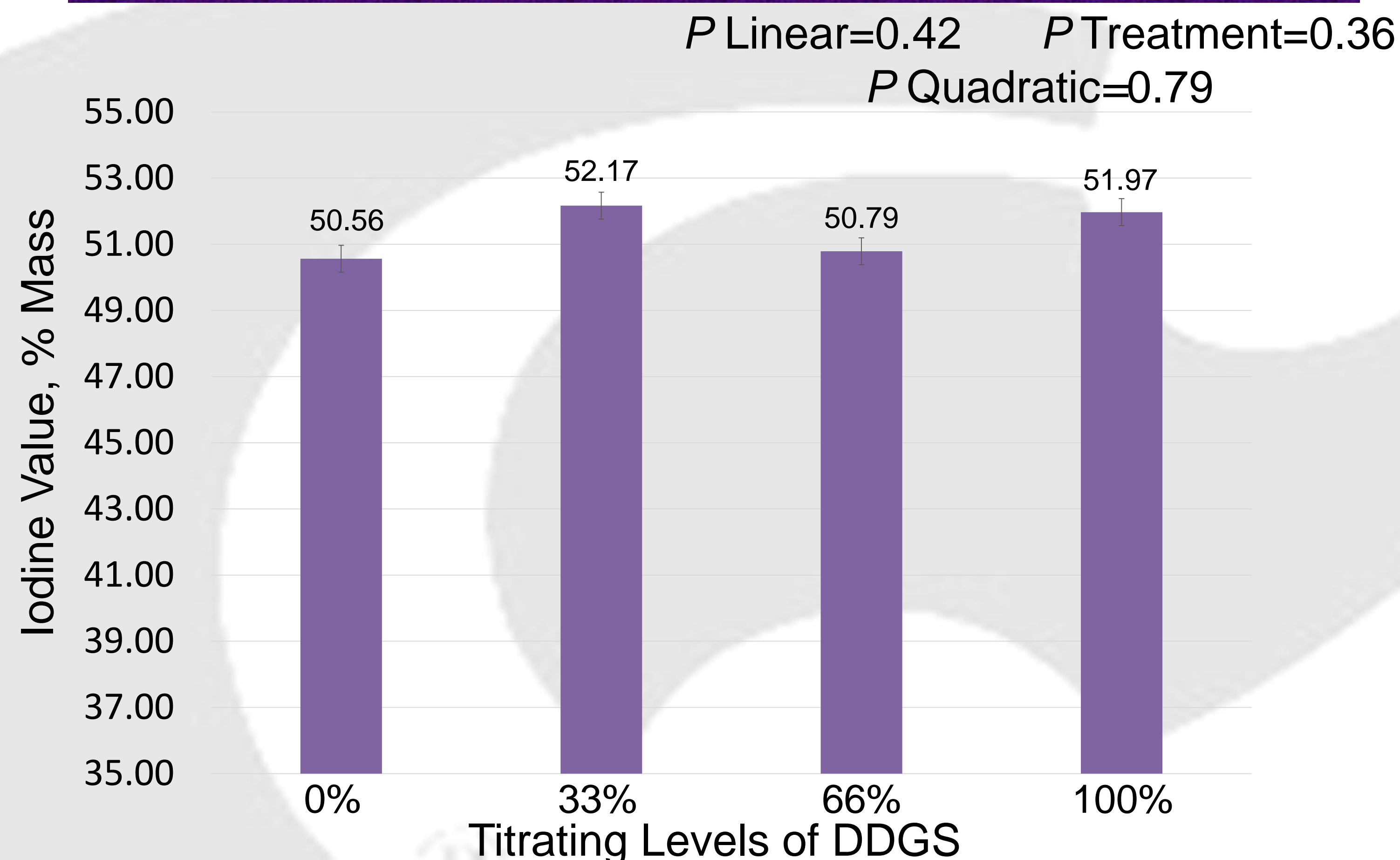
C16:1 vs. Treatment



C18:3 vs. Treatment



Iodine Value



Conclusions

- Replacing SBM with increasing levels of DDGS led to no significant impact on fatty acid profiles.
- DDGS impacted C16:1 and C18:3 in a quadratic manner.
- No significant impact was determined with iodine values or saturated to unsaturated ratios.
- DDGS can be an alternative diet for meat goats without impacting the carcass characteristics.
- Fat quality is not impacted with increasing levels of DDGS.



Acknowledgments

This project received funding from the Kansas Corn Commission. We also gratefully appreciate the employees at the KSU Sheep and Goat unit for their assistance.