# Growth and economic impact of Boer-type goats fed diets with CGF and DDGS as a substitute for SBM

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## Introduction

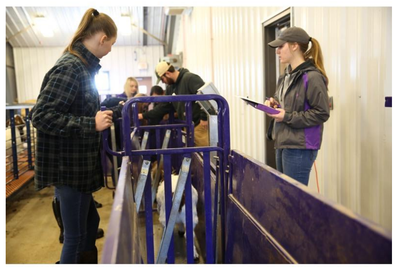
- Corn co-products are a relatively inexpensive protein source when compared to SBM and is readily available in the Midwest.
- There is little information available pertaining to goat growth performance to producers, making it difficult for producers to choose the best diet for their operation

## Objective

- Determine the growth and economic impact of replacing SBM with varying levels of corn dried distillers grain with solubles (DDGS) and corn gluten feed (CGF) in Boer-type goat growth performance.

## Experimental Procedures

- 75 Boer-type goats (26.9 ± 0.2kg, approximately 70 d of age)
- Experiment lasted 35 days
- Diets were randomly assigned with 3 goats/pen and 5/pens per diet
- Goats and feeders were weighed once a wk
- Any feed added was weighed and recorded
- Alpha value set at 0.05



## Experimental Diets

**Diets were isonitrogenous and isocaloric and varied in protein sources**

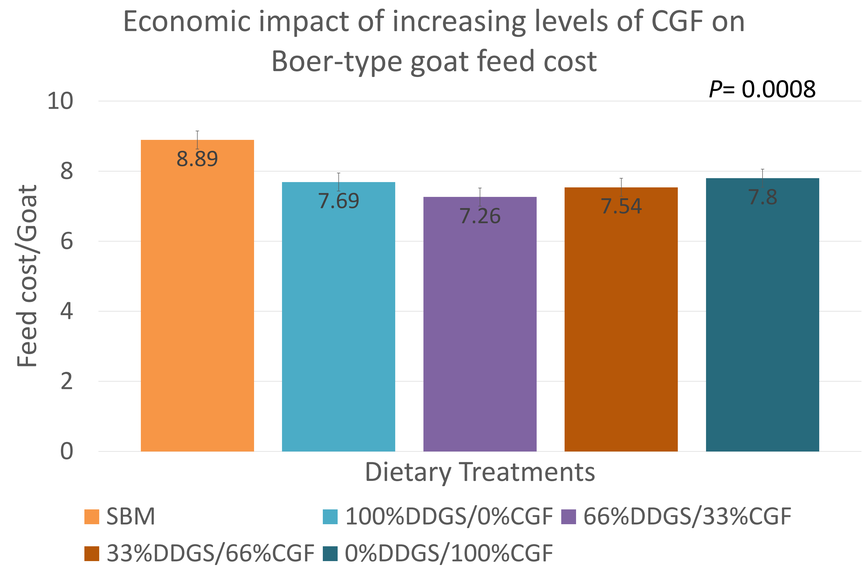
1. SBM
2. 100%DDGS/0%CGF
3. 66%DDGS/33%CGF
4. 33%DDGS/66%CGF
5. 0%DDGS/100%CGF

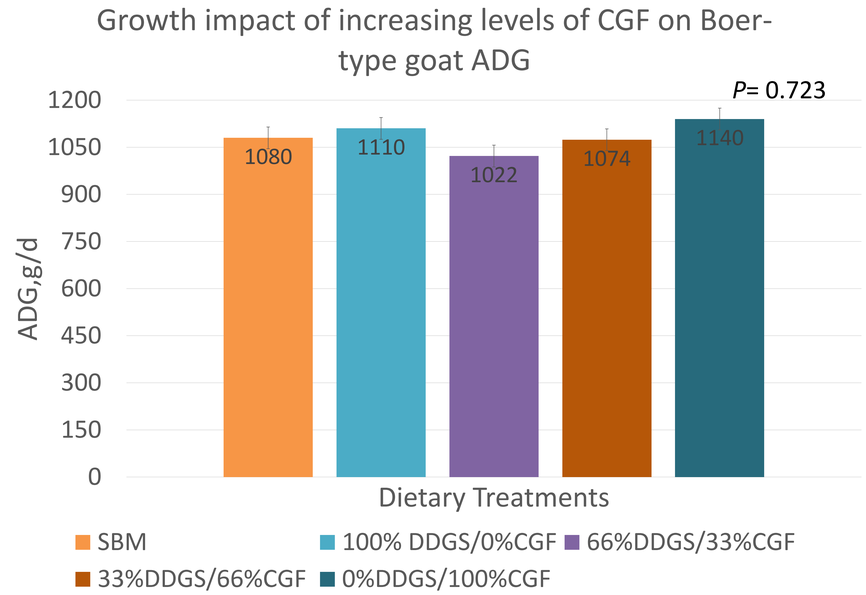
Table 1. Diet formulation and analyzed nutrient composition[1]

| | SBM Control | 100% DDGS/ 0% CGF | 66% DDGS/ 33% CGF | 33% DDGS/ 66% CGF | 0% DDGS/ 100% CGF |
|---|---|---|---|---|---|
| Corn gluten feed | 0.0 | 0.00 | 12.6 | 25.3 | 37.9 |
| Corn dried distillers grains with solubles | 0.0 | 20.2 | 13.5 | 6.8 | 0.0 |
| Soybean meal, 48% CP | 15.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Corn | 42.7 | 11.5 | 13.7 | 15.8 | 18.0 |
| Soybean hulls | 35.7 | 62.2 | 54.2 | 46.2 | 38.1 |
| Molasses | 2.50 | 2.50 | 2.50 | 2.50 | 2.50 |
| Ammonium chloride | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Limestone | 1.58 | 1.23 | 1.48 | 1.73 | 1.98 |
| Salt | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| Se Selenite | 0.001 | 0.0001 | 0.001 | 0.0001 | 0.009 |
| Vit A 30,000 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 |
| Vit D 30,000 | 0.004 | 0.004 | 0.004 | 0.004 | 0.004 |
| Vit E 20,000 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 |
| Copper sulfate | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| Zn Oxide | 0.008 | 0.008 | 0.008 | 0.008 | 0.008 |
| Monocalcium phosphate | 0.96 | 0.83 | 0.55 | | 0.00 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| | | | | | |
| Analyzed Nutrients, % as-fed | | | | | |
| Crude protein | 16.7 | 17.1 | 17.2 | 16.7 | 17.0 |
| Crude fat | 3.10 | 3.27 | 2.74 | 2.36 | 1.94 |
| ADF | 12.0 | 15.6 | 27.4 | 23.8 | 17.8 |
| Digestible energy, Mcal/kg | 3.13 | 3.16 | 3.14 | 3.14 | 3.15 |
| Ca | 1.08 | 1.07 | 1.05 | 1.06 | 1.06 |
| P | 0.55 | 0.57 | 0.58 | 0.55 | 0.53 |
| S | 0.19 | 0.18 | 0.24 | 0.24 | 0.25 |

1Treatment diets were fed to 75 growing Boer-type goats (3 goats/pen, 5 pens/treatment) for 35 d.

## Results




## Conclusions

- In conclusion, CGF and DDGS can economically replace SBM in Boer-type growing goats diets

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