DIETARY STARCH DILUTION STRATEGIES TO IMPROVE RUMEN HEALTH AND PERFORMANCE IN FEEDLOT CATTLE

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INTRODUCTION

Typical finishing feedlot diet:

- 8 to 10% roughage
- High proportions of processed grains
  - Maximize DMI, ADG, & G:F
  - Minimize the cost per unit of energy
  - Highly fermentable
  - Risk for metabolic disorders

(Brown, et al., 2006; Samuelson et al., 2016)

RESEARCH QUESTION

Roughage

Grain Milling Co-products

Does starch dilution play a more important role than physically effective fiber?

OBJECTIVES

1) Determine the effects of starch dilution post terminal implant on feedlot cattle performance and carcass characteristics.
2) Quantify rumen buffering characteristics & integrity of cattle consuming isocaloric diets, but different sources of dietary fiber.

HYPOTHESIS

↓ starch concentration

IMPROVE INTAKE, RUMEN HEALTH

&

ANIMAL GROWTH PERFORMANCE

MATERIALS & METHODS

	Treatments			
Item	CON	CS	WD	NR
Ingredient, % of DM				
Corn grain, flaked	64.8	55.1	54.7	54.2
Sweet Bran	20.0	20.0	20.0	20.0
WDGS	0.00	0.00	9.5	19.0
Corn Stalks	7.50	14.75	7.50	0.00
Corn Oil	1.10	3.52	1.75	0.22
Molasses Blend	2.50	2.50	2.50	2.50
Supplement	4.10	4.10	4.10	4.10

CONCLUSION

Although increasing the proportion of corn stalks in the diet post-terminal implant increases DMI, ME intake, and rumination, replacing corn stalks with WDGS improves G:F without negatively influencing rumen health.

QUESTIONS?

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