Honduran fed cattle diets and how they affect live weight and ribeye area

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INTRODUCTION

- The majority of cattle diets in Honduras involve grass feeding, which routinely results in a low dressing percentage and live animal growth.
- Sugar cane is used as a source for biofuel. It is an economic way for extracting sugar/sucrose that are obtained after crushing (JAIN & NAANDANJAIN, 2013).
- Palm kernel meal is an excellent product ussed as a renewable energy. Palm Kernel is obtained after crushing in the palm oil mill, also cointains a highter heating value tan lignocellulosic biomass. (Safar, 2015).

OBJECTIVE

- The objective of this study was to explore alternative diets for increased live weight growth in beef cattle production in Honduran cattle.

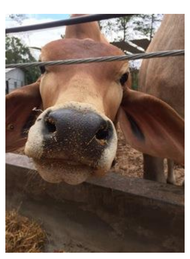
METHODS

- Four different diets were fed to *Bos indicus* cross cattle in this study. Table 1 presents the rations on an as-fed basis for each finishing program used in this study. Treatments are named as follows: Palm kernel (PK), Sugar cane (SC), Grass-fed (GF), Soybean Meal and Poultry litter (SP).
- Cattle were transported from their respective feedlot locations to the processing plant in Siguatepeque, Honduras, CA. Animal carcass identity was maintained throughout harvest and fabrication. Live weight (LW) was recorded prior to harvest. After a 24-hour carcass chilling period and a minimum 1 hr bloom time, ribeye area data were collected. The data were analyzed by the program PROC GLIMMIX.

Table 1. Ingredient composition (AF basis) of the experimental diets in fed in Honduras finishing trials

	Treatment[1]		
Ingredient (%)	PK[2]	SC[2]	SP[2]
Sugar cane	50.00	63.75	55.00
Palm Kernel Meal	35.00	11.66	6.00
Molasses	7.00	4.56	---
Corn	8.00	9.12	---
Poultry Litter	---	10.90	9.00
Semolina Mixed	---	---	----
Fresh Cut Grass	---	---	15.00

[1]PK=Palm Kernel Meal Diet, SC=Sugar Cane, SP=Soybean Meal and Poultry Litter.
[2]Cattle on these treatments were given free choice mineral supplementation (Nutrivyn Crecimiento)





RESULTS

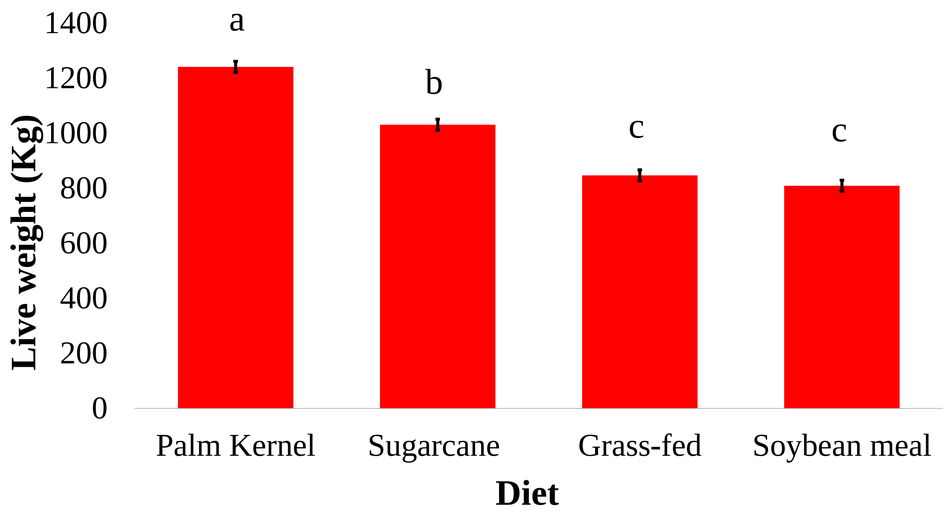


Figure 1. Live weight average for palm kernel, sugar cane, soybean meal with poultry litter and grass fed diets.
[a-c] Means with different letters are significantly different ($P < 0.05$).

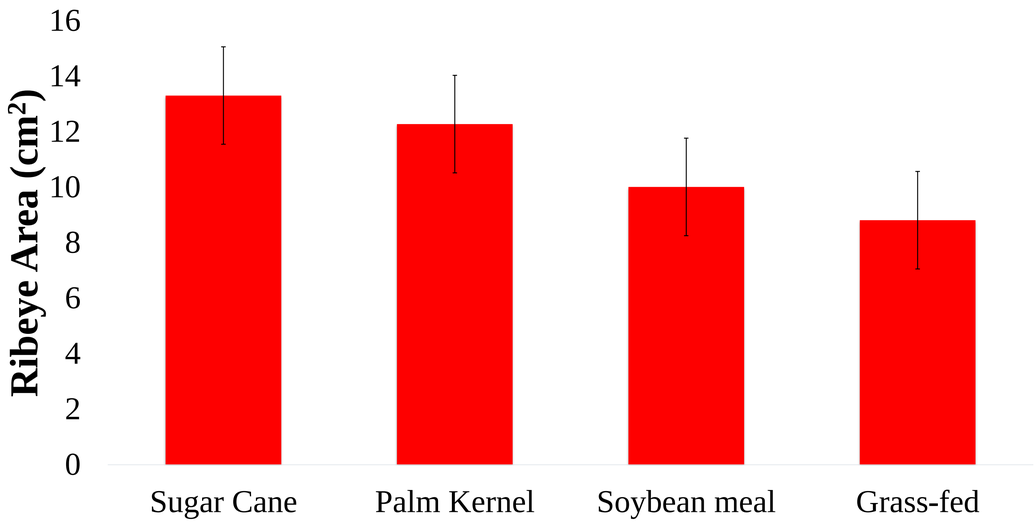


Figure 2. Ribeye area average for palm kernel, sugar cane, soybean meal with poultry litter and grass fed diets.
Diet did not affect ribeye area ($P > 0.05$).

CONCLUSION

The results show that the diets used contributed significantly to live weight (P<0.05), and the heaviest live weights resulted from the palm kernel meal treatment. Also, there was no significant difference in ribeye area between treatments. Additionally, there was no correlation between ribeye area and live weight across all treatments. This lack of significance can be attributed to other factors like age, days on feed, breed type and/or environmental stress.

References

- JAIN & NAANDANJAIN, 2013, Sugar cane. Available in: http://www.naandanjain.com/uploads/catalogerfiles/sugar-cane-2/Suger_cane_booklet_100613F.pdf
- Safar, 2015, Palm Kernel Shells as Biomass Resource. Available in: http://www.bioenergyconsult.com/palm-kernel-shells-as-biomass-resource/

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