



Honduran Production Systems and Dietary Impacts on Beef Carcass and Offal Yields and Value

R. N. Carmichael*, M. M. Brashears, A. J. Garmyn, C. J. Brooks, T. L. Opheim, M. E. Bueso, and M. F. Miller

Texas Tech University, Lubbock, TX, USA

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Objectives

Having been once the largest exporter in CA for beef to the U.S., Honduras had a dramatic decrease in efficiency and production numbers due to a devastating hurricane in 1998. The purpose of this study was to measure dietary impacts on beef carcass and offal yields and value.

Materials and Methods

Faculty from Texas Tech University worked alongside with Honduran cattle producers to develop feeding trials with specific diets for each producer. Feedstuffs in each diet were determined by local availability and price. A total of five new finishing programs were established with an additional grass finished program as control. The six treatments were: dried distillers grains (DDG), palm kernel meal (PKM), sugarcane (SC), soybean meal and corn (SBMC), sorghum (SORG), and grass fed (GF). *Bos indicus* crossbred cattle were utilized and harvest yield ($n = 240$) and carcass fabrication data ($n = 142$) were collected from each treatment at a local processing plant in Siguatopeque, Honduras. Carcass sides were fabricated according to IMPS, fresh beef products, 100 series. All subprimals were collected, with trim sorted according to normal processing standards, and bone weight also collected. All observations were evaluated by PROC GLIMMIX in SAS (version 9.3, SAS Inst. Inc., Cary, NC) to a significance level of ($P < 0.05$). Diet served as the fixed effect, while kill group was included in the model as a random effect.

Results

The SBMC treatment was significantly heavier for live weight (LW), hot carcass weight (HCW), cold carcass weight (CCW), and red meat yield (RMY). There was no difference between percent of RMY of CCW (%RMY/CCW, calculated by dividing RMY by CCW) between all treatments. Our GF treatment was least for LW, HCW, CCW, and RMY. Overall offal weights were heaviest ($P < 0.01$) for SBMC and least for GF (70.19 and 51.84 (kg), respectively). Offal was most valuable for our DDG, SC, SBMC, and SORG treatments (61.95, 63.16, 62.93, and 61.01 (US\$), respectively, $P < 0.01$). Our GF treatment was significantly least for offal value (49.90 (US\$), $P < 0.01$). Additionally, SBMC was heaviest ($P < 0.01$) for ribeye roll, skirt, clod, knuckle, outside round, inside round, eye of round, pressed trim and ribs. Our GF treatment was lightest ($P < 0.01$) for ribeye roll, brisket, clod, tenderloin, striploin, top sirloin, knuckle, outside round, inside round, eye of round, shank meat, 80/20 lean, 50/50 trim, ribs, white bone and red bone. Our SBMC treatment was highest for CV (carcass value) ($P < 0.01$) at 1429.07 (US\$), while our GF treatment was lowest for CV at 930.43 (US\$). Additionally, our SBMC diet was most profitable to the processor, resulting in a 259.96 (US\$) profit, while GF was least profitable at 164.68 (US\$; $P < 0.01$).

Conclusion

Overall there were ($P < 0.01$) differences in RMY for all treatments. However, there were no differences in

%RMY/CCW ($P = 0.17$). With increases in energy and protein within the diet, there was a significant increase in weight, therefore an increase in RMY, CCW, and overall CV. Every formulated finishing program was considerably more valuable and higher yielding than GF, and would re-

sult in a superior monetary product for the producer, packer, and consumer. The RMY, and consequently CV, was highly influenced by weight. Overall, any treatment compared to GF increased weight, therefore increasing monetary profit for the processor and producer.

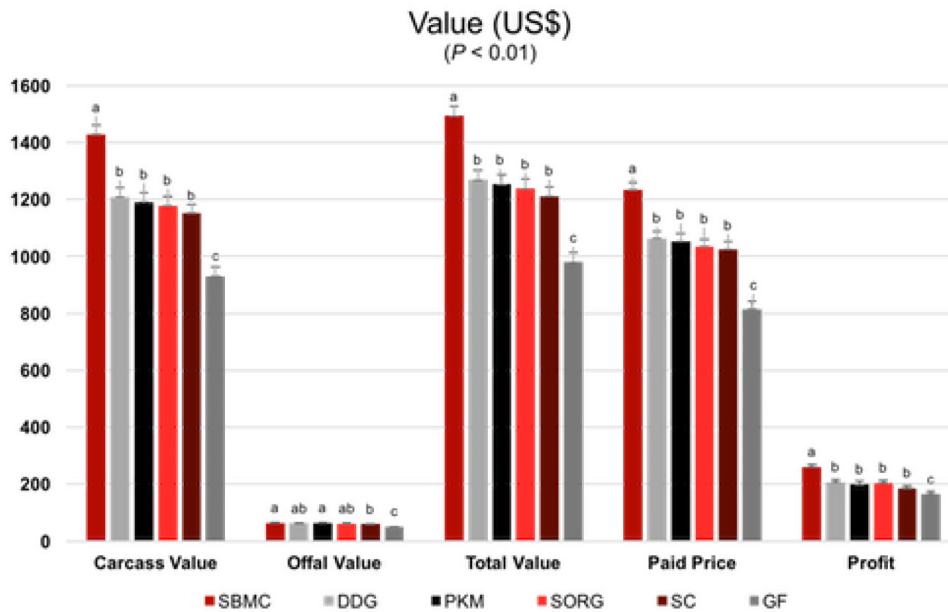


Figure 1.