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Crossing beef cattle with Chihuahuan Criollo cattle is an efficient alternative for beef production in arid environments of northern México

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Growth performance and meat quality traits of Angus x Chihuahuan Criollo steers (n=8, AxC) were compared with those of Hereford x Angus (n=8, HxA) and pure-bred Chihuahuan Criollo steers (n=8, CCC, rustic breed adapted to arid conditions, originated from cattle brought to the Americas by the conquerors). Until 15 months old, all animals grazed natural pastures or irrigated pastures complemented with corn stubbles and bread waste. Later on, animals were finished in individual pens with 30:70 forage:concentrate diet (16% CP and 12 MJ/kg ME). Steers were slaughtered at 18 months of age. Carcass traits were measured after 48 h post-mortem. Live weight of AxC steers grazing remained notably higher than HxA and CCC. On feed-lot HxA had highest weights and daily gains. Remarkably, growth of AxC steers was best under grazing than feed-lot conditions. RFI from CCC steers under feed-lot conditions was lower (-0.132 kg/day) than for AxC (0.036 kg/day) and HxA (0.094 kg/day). Carcass yields were higher for AxC steers (60.4%) than for HxA (58.6%) and CCC steers (55.6%). AxC and HxA steers had higher back-fat deposits than CCC (3.7, 3.4 and 1.5 mm, respectively), but AxC had higher marbling score than HxA and CCC (2, 1.7 and 1; 1 to 5 scale, respectively). Despite its small size, CCC had similar rib eye area than HxA and AxC (11.0, 10.9 and 11.6 inches², respectively). Discoloration was lower in meat from CCC. We conclude that the cross AxC has the performance benefits from Angus and the efficient use of food ability from CCC, especially on grass conditions.

Biography

Ivan A García-Galicia has completed his PhD from Bristol University in the United Kingdom. He has been a Lecturer on the Universidad Autónoma de Chihuahua, México since 2010. His research interest is the pre-mortem factors affecting meat biochemistry and meat quality. Lately, he has developed the interest for more efficient and less environmental impacting alternatives on beef production.

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