ABSTRACT

The objective of this research was to determine if the postweaning residual Feed intake (RFI) classification of beef heifers remain consistent as the animals matured, went through different stages of production and were placed in different feeding systems. Three feed intake trials, using the GrowSafe feed intake system, (postweaning, dry and lactating) and a two-year pasture trial were conducted on the same 33 Simmental X Angus females from a single herd. Data from all three GrowSafe trials were pooled and stepwise regression (SAS PROC REG) was used to calculate expected feed intake (EFI) across all trials. Individual RFIs were calculated as the difference between actual dry matter intake (ADMI) and EFI. Cows were then categorically grouped as Low (RFI < 0.5 SD below the mean), Average (RFI ± 0.5 SD above and below the mean) and High (RFI > 0.5 SD above the mean) based upon individual RFI classifications for each trial. No correlations (P > 0.1) were found between postweaning RFI classifications and either trial as mature animals (dry or lactating). The overall average daily intakes in the pasture study were lower (P < 0.05) than in the GrowSafe trials (15.0 kg and 18.4 kg, respectively). When compared to the high category cows, the low category cows had reduced metabolizable energy intake (MEI) [Mcal/hd/d], and recovered less energy (RE), (P < 0.01) across all trials. Noticeable movement in regards to RFI ranking occurred between trials. Of the 33 animals tested only three remained in the same category across all three trials.