**Selection of Simmental and Simbrah Cattle through Residual Feed Intake (RFI) for the Fair Use of Resources**

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Approximately two-thirds of the cost of cattle production is directly related to the cost of feed inputs, the strategies that improve the efficiency of feed utilization will increase the economic viability of livestock operations. The objectives of this research were to know the possibility of using the Residual Feed Intake (RFI) as an indicator for genetic selection for Simmental and Simbrah cattle. Also to determine, if there are among the test group, individuals with a negative RFI. And to observe if there are any differences regarding the gender variable in the average daily gain weight and feed intake between males and females participating in this study. This study was conducted in the period of September to November 2014, in the municipality Linares, Nuevo Leon, Mexico. This study involved the evaluation of bullocks (n= 29) and heifers (n= 20) of the Simmental (n= 26) and Simbrah (n= 23) breed who were randomly assigned. The features measured to evaluate male and females were the following: 1. Residual Feed Intake (RFI). 2. Average dry matter intake (DMI). 3. Average daily gain (ADG). It was able to determine that under the conditions in which the present research was carried out; it is not possible to use the RFI as an indicator for genetic selection for Simmental and Simbrah cattle. It was noted that there is no correlation between the RFI, DMI and ADG. The results of the study do not show a significant association (P<0.05) between the different variables studied and the RFI of the Simmental and Simbrah cattle. The test detected individuals among the group with a negative RFI, in both breeds Simmental and Simbrah. It was reported that the ADG weight in males was significantly greater than the ADG weight in females.

Key words: Simmental, Simbrah, residual feed intake, feed efficiency.