Comparison of Grazing Behavior of Rangefed Raramuri Criollo Steers During Pre-monsoon and Monsoon Seasons

For the past twenty years, drought has strongly affected the southwest United States and northwest Mexico; described as arid to semi-arid, with annual precipitation of less than 406.4 mm. Choosing cattle breeds which are adapted to this climate, and topography in order to maximize the feed resources without degrading them is an ongoing challenge in the region. The Criollo breed, originally from North Africa and Spain, and naturalized throughout the Americas for the past 500 years, is a type of cattle which seems to be well adapted to the drought conditions currently prevalent in the region. This study was conducted on the 47 Ranch in southeastern Arizona. We collared 15 Raramuri Criollo steers in 2017 and 7 in 2018. The objective was to observe grazing behavior differences between the pre-monsoon (April to June, 2017; March to June, 2018) and the monsoon season (July – October, 2017; July – September, 2018). In the 2017 study period, the rainfall was 270.26 mm (pre-monsoon = 1.27 mm, monsoon = 268.99 mm) and for the 2018 study period, the rainfall was 146.56 mm (pre-monsoon = 13.97 mm, monsoon = 132.59 mm). The study showed that on average, the steers spent more time near the two main water points of the Tombstone pasture (one well-water and one run-off water catchment) during the pre-monsoon (9% in 2017, 11% in 2018) than during the monsoon (3% in 2017, 2% in 2018). For both seasons and years, the steers started to come to water around 9 am with a peak at 12 pm during the pre-monsoon (pre-monsoon: 24% in 2017 and 24% in 2018, monsoon: 5% in 2017 and 3% in 2018). The data shows that for both seasons and years, there is no significant difference in the average distance traveled from water; yet, their utilization of the landscape is notably different.