

SELF-FEEDING BEEF CALVES ON BASALTIC DEFERRED NATIVE GRASSLANDS OF URUGUAY HAD SIMILAR ANIMAL PERFORMANCE THAN DAILY SUPPLEMENTATION

CAZZULI, F.^{1*}; LAGOMARSINO, X.¹; MONTOSI, F.¹

¹ National Institute of Agricultural Research (INIA), Tacuarembó, Uruguay. *: fcazzuli@tb.inia.org.uy

Extensive livestock production systems face major constraints such as labour shortage and the need to intensify production to maintain and/or increase the farmers' profitability. Thus, the objective of this research work was to determine whether it could be possible to attain similar animal performance through supplementing beef calves in their first winter using self-feeders compared to daily supplementation. An experiment was carried out at INIA Tacuarembó Experimental station, located in Northern Uruguay ("Glencoe" Experimental Unit) on basaltic medium/shallow soils. Native grassland paddocks were utilised from autumn to winter, having previously removed dead forage from the summer through intensive grazing sessions. The experiment lasted from 17th June to 13th November 2014 (149 days) and used Hereford calves (live weight; LW = 168 ± 15 kg; n = 40) born in spring 2013. Calves were randomly allotted to one of two replicates of the following treatments: Control (C), non-supplemented animals; Daily supplementation - using ground rice bran (RB) - (DG); Daily supplementation using pelleted rice bran (DP); Self-fed using ground rice bran distributed two times a week (SFG); Self-fed using pelleted rice bran distributed two times a week (SFP). Daily average supplementation rate was equal for all supplemented treatments (0.8 % LW). No differences between treatments were found for average forage mass and height ($P > 0.05$; 2225 kg DM/ha and 16.5 cm, respectively). Final LW was different ($P < 0.01$) between C (213.6 kg) and supplemented treatments, which in turn were not different between each other ($P > 0.05$; average 252.6 kg). Similar results were obtained for average daily gain (ADG), where C resulted in 0.303 kg/animal/day and all supplemented treatments had similar ADG ($P > 0.05$; 0.617 average kg/an/day). This experiment confirmed previous research results found by these authors about the importance of using deferred pasture from autumn to winter on native grassland to achieve moderate ADG of calves, even without supplementation. Self-fed supplementation had similar animal performance than daily supplementation, and similar results were observed when comparing supplement presentation (ground vs. pelleted rice bran). We concluded that normal winter calves LW losses on native grasslands can be overcome by using deferred grazing (from autumn to winter) and even more by using self-feeding supplementation strategies, which in turn had similar effects on animal performance than daily supplementation. This results shows that is possible to reduce labour use and its associated costs without negatively affecting productivity.

Keywords: automation, rice bran, supplementation methods, supplement presentation, winter