

Supplementation of calves in creep-feeding systems in native pastures in the Pantanal

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The Pantanal is an immense alluvial sedimentary plain, partially and periodically flooded, with a natural aptitude for beef cattle production due to the very large fields of native pastures that exist in special environmental conditions. The reproductive rates of herds in the region are low due to diet variability (composition and availability of forage), and the structural and physical condition of the properties. The weaning of calves from 90 days old has been used at São Bento Farm (Pantanal of Miranda/MS) as a strategy for reducing the nutritional requirements, with the consequent increase in herd reproductive efficiency. An experiment in native pastures was conducted, in order to assess the performance of calves, from birth to early weaning, by using an area of 885 hectares, divided into three parts, with 130 cows in each. Their calves were submitted to supplementation with Via Lac[®] (VLA), with Via Lac[®] + antimicrobial additives (VLM) and without supplementation (NSR). The amounts of supplement and leftovers were measured daily. The lots were formed by considering the date of birth, the sex of calves and the age of the cows. The lots were rotated and assessed at 28-day intervals. The botanical composition of the main grazing sites was evaluated by applying multipliers 70.2, 21.1, and 8.7 for the three main foraging species found in 150 observations measured in each site. The composition of the diet was estimated based on the frequency and defoliation of the forages observed. The experimental design used was completely randomized and data were analyzed with GLIMMIX procedure of the SAS program, version 9.12 (2010). The mimoso grass (*Axonopus purpusii*), mimosinho grass (*Reimarochloa brasiliensis*), felpudo grass (*Paspalum plicatulum*), thin grass (*Axonopus paraguayensis*), red grass (*Andropogon hypoginus*), red mimoso grass (*Setaria geniculata*), carandazal grass (*Panicum laxum*) and humidicola (*Urochloa humidicola*) were found in the frequencies of 29.8, 27.7, 14.5, 11.7, 6.4, 4.0, 3.3 and 2.7% respectively. The defoliation of the red grass was not observed, so it was excluded from the estimates of the diet composition. The chemical composition of the diet was 5.5% of crude protein (PB), 0.5% of acid-detergent insoluble nitrogen (ADIN), 68.9% of neutral detergent fiber (NDF), 35.7% of acid detergent fiber (ADF). The supplement offered to calves showed 18.5% of PB, 69.0% of NDT, 20.4% of NDF and 12.0% of ADF. Its consumption was 105.7g per animal per day, an amount considered below the expectations for the period, which justifies the need for products with high palatability under such conditions. The animals that were supplemented (VLA and VLM) exhibited, at the end of the period, an average weight of 118.7 and 115.3kg respectively, which was higher ($p>0.05$) than the animals that were not supplemented (NSR), 111.3kg. The animals that were supplemented also had higher ($p>0.05$) daily weight gain (0.892g and 0.854g), when compared to the NSR treatment, 0.773g. Another positive factor noted was that supplementation encouraged the learning of the animals regarding ration intake, which can be an advantage in the subsequent stage of weaning. Early supplementation for calves in the Pantanal promoted increased weight gain and may be used after prior economic analysis.

Keywords: early weaning, foraging species, management, ration, production systems

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