

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## **WEIGHT GAIN OF CALVES SUBJECTED TO FEED RESTRICTION AND SUPPLEMENTED WITH ADDITIVES**

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To achieve efficiency in the ruminant production system, management and nutrition are of paramount importance. Feed restriction allows the animals to have a lower requirement for maintenance energy due to lower body weight and metabolic adaptation with compensatory gain in the unrestricted period. Since the additives are used to cause a desirable response to the animal, such as pH change, growth promoter or metabolic modifier. The objective of this study was evaluate the effect of the MetaSmart Dry® (HMBi), Ruminatus Start® (RS) and two different milk feeding systems with or without milk restriction on calf weight gain. A group of twenty calves were used, identified with earrings and housed in individual pens for two periods of 28 days. They were allocated randomly in the following treatments: T1 - with restriction in the first period and inclusion of 4 g HMBi daily and without restriction in the second period; T2 - without restriction in the first and second periods receiving with inclusion of 4g HMBi daily; T3 - with restriction in the first period with inclusion of 1.5 g RS and without restriction in the second period; T4 - without restriction in the first and second periods with inclusion of 1.5g RS daily. In the restricted period the animals were fed with 3 L milk daily and in the unrestricted period they were fed with 6 L of milk daily. The milk supply was divided into two daily doses. The additives were mixed with milk, following the quantity established for each treatment and period. All animals received hay and concentrate ad libitum, the refused feed was quantified daily in order to estimate feed intake by the animals in the system. The animals were weighed to measure weight gain once a week. In the first period the animals of the restricted groups T1 and T3, obtained gains of 37.8 and 44.3%, respectively, and in the second period gains of 27.3 and 23.2%. On the other hand, the animals of the unrestricted groups T2 and T4 in the first period presented weight gains of 49.0 and 51.3% respectively and 18.2 and 20.4% in the second period. The higher weight gain in the second periods of the animals submitted to the feed restriction, suggesting compensatory gain of the restricted groups soon after the feeding was restored.

**Keywords:** calf growth, compensatory gain, milk yield

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