

## BODY WEIGHT GAIN OF LAMBS SUPPLEMENTED DIFFERENT LEVELS OF MESQUITE PIPERIDINE ALKALOID EXTRACT

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### ABSTRACT

The objective of the study was to evaluate the effect body weight of lamb fed with different levels of mesquite piperidine alkaloid extract (MPA). The final body weight gain, total weight gain and daily weight gain were evaluate. The experiment was conducted in the sheep and goat nutritional trials sector of the State University of southwest Bahia (UESB), Juvino Oliveira campus, located in the municipality of Itapetinga, Bahia. A total of thirty (30) Santa Inês lambs, approximately 3 months old were used and allocated in a completely randomized design (CRD), with six treatments: T<sub>1</sub>: control diet (no additives) + total mixed ration (TMR); T<sub>2</sub>: 9 mg/kg DM of MPA + TMR; T<sub>3</sub>: 18 mg/kg DM of MPA + TMR; T<sub>4</sub>: 27 mg/kg DM of MPA+ TMR forage; T<sub>5</sub>: 36 mg/kg DM of MPA + TMR forage; T<sub>6</sub>: 17 mg/kg DM of monensin sodium + TMR. And were confined individually in 1.5 m x 1.0 m stalls equipped with each feeding trough and waterer, while the experimental diet and water were given *ad-libitum*. To assess weight gain, the animals were weighed at the beginning and end of the experimental period. This was done before the morning feed was provided, with the animals fasting. The initial body weight was used as a covariate for final body weight (FBW), total weight gain (TWG) and daily weight gain (DWG). The final body weight, total weight gain and average daily weight gain tends to increase ( $0.05 < P < 0.10$ ) in lambs fed diets added with MPA levels. Orthogonal contrasts were performed to evaluate differences among treatments. A significant effect ( $P < 0.05$ ) was observed only when comparing MPA levels (9, 18, and 27 mg/kg DM) and 36 mg/kg of MPA with

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monensin, for final body weight, total weight gain, and average daily weight gain. These can conclude that increasing level of MPA does not affect performance of lambs.

**KEYWORDS:** Daily weight gain; Lambs; Monensin; Phytogetic additive; Prosopis juliflora.