





CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## EVALUATION OF MEAT COLORING AND MARBLING OF NELLORE AND NELLORE X ANGUS IN INTEGRATION SYSTEM

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Factors such as race, age, sex, handling, nutrition and breeding environment, when used together or in isolation will define the physical-chemical, technological, and sensorial quality of the meat. The precocity of the race/crossbreeding can be defined as the speed the animal reaches puberty, when bone growth ceases and decreases the rate of muscle growth, being intensified the filling of adipocytes, occurring fat deposition in the carcass. In general, precocious animals have smaller size and start depositing fat at a lower weight and reach the slaughter point quickly. The aim of this research was to evaluate the meat characteristics of Nellore and Nellore x Angus (F1) heifers in different forage production systems. The experiment was carried out in an area of nine hectares, where there were 36 heifers being evaluated, with an initial age of approximately seven months and live weight of 180 kg, being 18 Nellore and 18 Nellore x Angus, divided into high investment (HI) and low investment (LI) treatments. The HI treatments were: pre-existing pasture; pre-existing pasture with fertilization of 54 kg of P<sub>2</sub>O<sub>5</sub>.ha<sup>-1</sup>; pre-existing pasture fertilized with 54 kg of P<sub>2</sub>O<sub>5</sub>.ha-1 consorted with pigeon. The animals of the LI treatment remained at the same pasture during the dry season (June to October) and rainy season (November to May) periods. The animals were slaughtered at 20 months and the data obtained at slaughter were submitted to analysis of variance, considering the effect of genetic groups and treatments (different pastures), as well as the interaction between them. When there was a significant fixed effect (p <0.05), the means were obtained by least squares and compared by the Tukey Test. The F1 group presented higher values than the Nellore, for the marbling characteristics, loin eye area (LEA) and color intensity red (a\*) and yellow (b\*). There was observed superiority in the results of the HI treatments for LEA and marbling. The interaction between genetic group and treatment was significant only for LEA, being that animals of HI treatment differed from LI treatments (72.94 vs 66.89 cm<sup>2</sup>). There was observed superiority of F1 animals in the livestock farming integration system, with increase in the quantity and quality of the meat produced.

Keywords: crossbreeding, forage, quality, races, sensory characteristics

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