

**EFFECT OF DIFFERENT FINISHING SYSTEMS ON BEEF COLOR AND PH
OF ANGUS × NELLORE**

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Color is one of the main quality attributes of beef, directly influencing consumers' purchase decisions. Final pH is also an important quality indicator, since it is related to color and market display time. Therefore, pH and color parameters are important indicators of meat quality, since they reflect the biochemical changes resulting from nutritional management and different finishing systems. In this context, the this study aimed evaluate color and pH of beef from F1 Angus × Nellore cattle finished under different systems. Seventy

F1 Angus × Nellore young bulls , with an average age of 20 months and 461.93 kg initial body weight, were randomly allocated to three finishing systems: pasture with supplementation (SUP), with concentrate supplied at 0.8% of body weight (BW) (n = 22); intensive pasture finishing (TIP), at 1.6% of BW (n = 24); and feedlot, at 1.6% of BW (n = 24). In the pasture-based systems, animals were kept on *Brachiaria brizantha* cv. Marandu pastures; in the feedlot, the total diet consisted of 52% concentrate and 48% corn silage. After 90 days of the experimental period, animals were slaughtered at a commercial abattoir by cerebral concussion and exsanguination, followed by evisceration and carcass weighing. After 24 h of carcass cooling at 2 °C , a steak with 2.54 cm thickness from the *Longissimus thoracis* muscle was collected from each carcass to determine pH and color indices (L^* , a^* , and b^*). The pH was measured using a portable pH meter and color using a CR-400 spectrophotometric colorimeter (Konica Minolta®, Japan. Data were analyzed by ANOVA using PROC GLIMMIX of SAS, with means compared by Tukey's test at 5% significance. The feedlot system resulted in lower final pH (5.73), differing significantly ($P < 0.0001$) from animals finished on pasture (SUP: 6.55; TIP: 6.37), which did not differ from each other. Regarding color , beef from feedlot system showed higher lightness (L^* : 35.37), redness (a^* : 16.64), and yellowness (b^* : 9.58) indices compared with pasture-finished animals ($P[PT1.1] < 0.0001$). However, L^* , a^* , and b^* indices did not differ significantly between SUP and TIP. Finishing systems influence the color and pH of Angus × Nellore beef, with feedlot finishing providing more desirable beef quality characteristics, highlighting the importance of nutritional management during the finishing phase on the final product.

Palavras-chave: beef cattle; colorimetry; meat quality; ph; finishing system.