



Study of Polled Nellore lineages for carcass characteristic and meat quality

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Brought from India in the 18th and 19th centuries, the zebu cattle have become considerable share in the Brazilian herd. Adaptability, racial characteristics and exceptional development allowed rapid dissemination of these animals. With high number of progeny, some bulls began to be classified as lineage or genearca. We aimed to evaluate the carcass characteristics and meat quality based on the lineages of Polled Nellore. We used data from 68 male cattle Polled Nellore (brand B), whole, derived from a segregating population for meat tenderness; raised on pasture and finished in feedlot between the years 2011 and 2012. The animals were slaughtered with a 5 mm of fat backfat and / or 500 kg live weight, with a mean age of 23 months. At the end of the slaughter line, half carcasses were weighed and refrigerated with temperature between 0 ° C and 2 ° C for 24 hours. The characteristics evaluated were slaughter weight, hot carcass weight, cold carcass weight, hot carcass dressing, cold carcass dressing, primal cuts, section Hankins & Howe, pH, fat thickness, rib eye area, shear force, color, cooking loss, water retention capacity, marbling and tenderness. For data consistency it was used the software Statistical Analysis System (SAS, 2004) for the application of GLM, CLUSTER, WARD, DISCRIM and STEPDISC procedures. According to the distance between the clusters for carcass traits the **D**, **E** and **F** lineages form the group I; followed by **C** and **B** grouped in cluster II and the **A** lineage form the group III. According to the distance between the clusters for meat quality the **D** and **F** lineages formed group I, **B**, **C** and **E** formed the group II and the lineage **A** again remained alone in the group III. The **E** and **D** lineages showed higher weight to the forequarter. However, **E** and **F** obtained the best average weight to the hindquarter, cut with high added value. However, the lineage **A** had the highest average for hot and cold carcass dressing. The **A** lineage is distinct from the others due to the smaller average shear force, the highest value pH followed by the lowest means for the attributes of color, L* , a* and b*. The similarity between the mean values for the of shear force trait, L* , a* and b* allowed the formation of Group II with the lineages **B**, **E** and **C**. There is great variability between lineages of the breed Nellore for carcass and meat quality characteristics. Thus, the information of the lineages potential should assist the producer in mating , selection and breeding program , aiming the improvement of carcass and meat quality of Polled Nellore breed.

Keywords: ancestry, carcass dressing, quality, meat tenderness, selection, Zebu