

## FEEDLOT PERFORMANCE OF YOUNG BULLS AND STEERS OF FOUR DIFFERENT GENETIC GROUPS

TULLIO, R.R.; CRUZ, G.M.; SAMPAIO, A.A.M. AND ALENCAR, M.M.

FCAV/UNESP, Jaboticabal, Brazil.  
Southeast-Embrapa Cattle, São Carlos, Brazil.

The objective of this study was to evaluate the feedlot performance of 71 intact or castrated (at weaning) Nellore (NE), Canchim x Nellore (CN), Angus x Nellore (AN) and Simmental x Nellore (SN) calves, born in 2000 and 2001. A corn silage and concentrate diet was fed for an average of 178 and 157 days after weaning for year I and II, respectively. The average age at the beginning of the study was 251 days while the average liveweight were 220, 218, 229 and 241 kg for NE, CN, AN and SN, respectively. Feed and orts weights were taken daily. Liveweights were measured after 16 hour fast of feed and water. Data were analyzed by the least squares method with a model that included the effects of year, sexual condition (SC), genetic group (GG) and SC x GG. The average daily gain was higher ( $P < 0.05$ ) for bulls than for steers (1.25 vs. 0.97 kg), and also higher for AN (1.24 kg) and SN (1.17 kg) than CN (1.04 kg) and NE (0.97 kg). The dry matter intake was higher ( $P < 0.05$ ) for bulls than for steers (7.4 vs. 6.9 kg), and higher for AN (7.6 kg) and SN (7.5 kg) than for CN (6.7 kg) and NE (6.6 kg). The feed:gain ratio was better ( $P < 0.05$ ) for bulls than for steers (6.0 vs. 7.1) and better for AN (6.2) than for NE (7.0). The interaction SCxGG were not significant ( $P > 0.05$ ) for all variables studied. Financial support: EMBRAPA and FAPESP.

## SUSTAINABLE MODEL OF FEEDING CATTLE IN THE COLOMBIAN ANDES ABSTRACT

RODRÍGUEZ, R.B. AND VASQUEZ, H.J.A.

One of the basic worries of sustainable animal nutrition is to lower the ecological impact in small farm cattle exploitations located in hill side areas using forage and its supplements under stabling conditions. The purpose of the research was to prove that good quality stabling steers for slaughter can be produced in comparison to the system of production in grazing in hill side areas. The model feeding it was carried out in Gachetá, Cundinamarca, Colombia, to 1775 meters on the sea level and to a temperature of 17 to 24 centigrade degrees. Twelve steers were used, with a average weight of 350 Kilogram of weight, they were selected at random, leaving six steers in grazing rotationally with Kikuyo (*Pennisetum clandestinum*) and the other six in the stabling, with the help of silage, cut forage, minerals salt and water. Steers was weighed weekly, using their thoracic perimeter and were measured with a bovinometric tape. At the 180 days the steers stabling won more than the steers in grazing (524 grams per day versus 335 grams per day). The supplementation with forages in ensilage form, preserving the soil of the impact of the animal on a hillside and they take advantage better, since these are used in the good moment of being consumed. This sustainable model feeding in stabling, it is profitable, processing the manure in bioabonos.

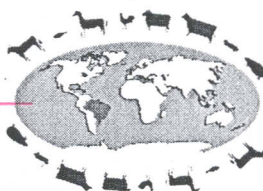
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## CARCASS CHARACTERISTICS OF YOUNG BULLS AND STEERS OF FOUR DIFFERENT GENETIC GROUPS FINISHED IN FEEDLOT

TULLIO, R.R.; CRUZ, G.M.; SAMPAIO, A.A.M.; SOUZA, P.A. AND ALENCAR, M.M.

FCAV/UNESP, Jaboticabal, Brazil.  
Southeast-Embrapa Cattle, São Carlos, Brazil.

The objective of this study was to evaluate the carcass characteristics of 71 intact or castrated (at weaning) Nellore (NE), Canchim x Nellore (CN), Angus x Nellore (AN) and Simmental x Nellore (SN) calves, born in 2000 and 2001. Animals were slaughtered when estimated carcass weight was greater than 200 kg for NE and CN or 225 kg for AN and SN and ultrasound backfat over 3 mm. Data were analyzed by the least squares method with a model that included the effects of year, sexual condition (SC), genetic group (GG) and SC x GG. Slaughter weights were higher ( $P < 0.05$ ) for bulls than for steers (428 vs. 391 kg) and also higher for AN (423 kg) and SN (438 kg) than for CN (393 kg) and NE (383 kg). Age of slaughter of all GG was 419 days with a dressing percentage of 57%. However, there was difference in age of slaughter (411 vs. 425 days) and in dressing percentage (57.4 vs. 56.7) for bulls and steers, respectively. Backfat thickness was higher for steers than for bulls and higher for AN than for CN and SN animals. Rib eye area was higher for steers than bulls and higher for SN than the other groups. Bulls showed higher percentage of forequarter (38.4 vs. 37.0 %) than steers. The interaction SCxGG were not significant ( $P > 0.05$ ) for all variables studied. Bulls can be slaughtered at 14 months of age with desirable carcass quality. Crossbreeding improved final carcass weight. Financial support: EMBRAPA and FAPESP.



## MEASUREMENT AND CONTROL OF SELECTIVE FEEDING OF TMR

PARK, S. AND OKAMOTO, M.

Department of Dairy Science, Rakuno Gakuen University, Ebetsu, Hokkaido, Japan

Selective feeding of total mixed ration (TMR) may occur when the TMR has unsuitable physical characteristics. The particle size distribution of TMR was measured every hour in a herd in which cows tended to select concentrate particle from forage particle. The average daily milk production was 27.6kg and milk fat percentage was 3.43%. Percentage of the long particle increased from 40.3% to 82.8% in 8 hours after feeding. It indicated that selective feeding was completed within 8 hours. There was a difference in the rate of increase of particle size among the position inside the heap of TMR. The measurement of particle size every 5 minutes during eating indicated that selective feeding at particular position of the feed bunk was completed within 30 minutes after feeding. After grass silage is changed to the short one, the rate of change in particle size decreased, and it took more than 12 hours to reach the long particle to 50%. Also, the clear change in particle size of upper/lower layer in the heap of TMR was not observed within 1 hour. The results indicated that selective feeding could not avoid when TMR contains silage with long particle size i.e. 30% or more remains in the upper sieve of the Pennsylvania separator. If the TMR contained 20% or less long particles, it is able to control selective feeding to the level without practical problem. The milk fat percentage increased to 4.25% in a month without change in milk yield.