Nellore (NE) and crossbred Canchim x Nellore (CN), Angus x Nellore (AN) and Simental x Nellore (SN) young bulls (68 animals), out of Nellore or high grade Nellore cows, with initial empty body weight of 294.8 ± 42.8 kg were fed for 92-161 days to the same degree of finishing (at least 225kg carcass and 6mm backfat thickness by ultrasound). Diet had 60% corn silage: 40% concentrate, 13.8% CP and 71.5% TDN on a DM basis. Initial carcass weight was estimated from a similar group of 14 animals slaughtered before the start of the trial. Empty body gains (kg/day) were 1.34a (AN), 1.12b (CN), 1.39a (SN) and 1.03b (NE). Final carcass weights (kg) were 305.7b (AN), 293.4b (CN), 324.8a (SN) and 245.1c (NE). Crossbreeding improved carcass daily weight gain (kg/day) for AN (0.96a) and SN (0.94a) as compared to NE (0.66c) and CN (0.84b). There were no differences among yield of carcass as related to shrunk weight gain (67.8 ± 3.4 %BWG). Carcass yield as related to empty body weight gain (%BWG) was highest for Canchim (75.8a) and lowest for Nellore (65.1b) while Angus and Simental were intermediary (71.4ab and 67.8b). Carcass gain and yield at similar end point is an excellent ‘output’ parameter to evaluate feedlot. Crossbreeding improves carcass production from Nellore cows, however changes in feed intake (inputs) have to be taken in account.