

Carcass composition of entire and castrated full blood improved Boer bucks

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The goat meat industry in Australia is changing from harvesting feral goats to farming meat type goats ie Boer crosses. The South African Improved Boer goat has been reported to produce heavier carcasses with better quality of meat than other breeds (1). However, their ability to produce carcasses and meat has not been determined under Australian management practices and environmental conditions. In this experiment, we examined the carcass composition of entire and castrated Improved Boer bucks under Australian conditions. One reason for castrating goats is to cater for different market preferences – some markets prefer castrated goats while others prefer entire goats (2).

Ten 6-month old full blood Improved Boer bucks with an average initial live weight of 26.4 kg were grazed together in a paddock with access to commercial goat pellets (ME = 12.3 MJ/kg DM, CP = 18% DM), grassy lucerne hay and pasture. At the start of the experiment, half of the goats were castrated and all goats were slaughtered at approximately 30 kg liveweight after about 75 days on feed. Carcass dissections were done using standard procedures for goat carcass evaluation, jointing and tissue separation (3).

	Castrated ¹	Entire ¹
Live weight (kg)	32.0 ± 0.5 ^a	30.8 ± 0.5 ^b
Fasted body weight (kg)	29.4 ± 0.5 ^a	28.8 ± 0.5 ^a
Empty body weight (kg)	26.1 ± 0.4 ^a	22.8 ± 0.4 ^b
Cold carcass weight (kg)	14.2 ± 0.2 ^a	11.3 ± 0.2 ^b
Dressing percentage (%)	54.5 ± 0.9 ^a	49.8 ± 0.9 ^b
Muscle (g)	9761 ± 205.7 ^a	8056 ± 205.7 ^b
Intermuscular fat (g)	1282 ± 57.9 ^a	626 ± 57.9 ^b
Subcutaneous fat (g)	399 ± 29.6 ^a	152 ± 29.6 ^b
Total bones (g)	2351 ± 48.4 ^a	2296 ± 48.4 ^a
Muscle to bone ratio (M:B)	4.1:1 ± 0.1 ^a	3.5:1 ± 0.1 ^b

^{a,b}means within the rows with different superscripts are significantly different (P < 0.05).

¹mean ± SEM.

The results indicate that when slaughtered at the same liveweight, castrated Boer goats produced higher dressing percentages, dissected lean, fat and M:B than entire Boer goats. The average yield of muscles from the carcass is approximately 72%. Intermuscular fat contributed more to the carcass weight than subcutaneous fat. It also appears that when slaughtered at 30 kg liveweight, castrated Boer bucks have twice total dissectible fats in their carcass than entire Boer bucks (11.8 vs 6.9%). Bones contributed 16.6 and 20.3% to the carcass weight of castrated and entire Boer bucks, respectively. It is likely that those proportions will decrease with increasing liveweight.

1. Malan SW. The improved Boer goat. *Small Rum Res* 2000; 36: 165–170.
2. Murray PJ, Qualisichfski EQ, Flint MS. The Taiwanese market prefers castrated goats whereas the Middle East prefers entire males. In: *Proc Ntr Soc Aust* 2000; 24: 80.
3. Colomer-Rocher F, Morand-Fehr P, Kirton AH. Standard methods and procedures for goat carcass evaluation, jointing and tissue separation. *Liv Prod Sci* 1987; 17: 149–159.