

EFFECT OF CARCASS WEIGHT, SEASON AND POST-SLAUGHTER MANAGEMENT OF LAMB CARCASSES ON MEAT TENDERNESS

H.A. CHANNON

Consumers are now demanding leaner and meatier lamb cuts. Lamb carcasses of 22-26 kg with a fat score of 2 to low 3 are well suited to supplying this market requirement. However, many retail butchers do not handle carcasses of this size due to perceptions of poor meat quality (Channon 1990).

To determine whether differences in meat quality exist between lamb carcasses of different weights (18-20 kg, 20-22 kg and 22-26 kg), a quality assurance program is being conducted on a quarterly basis amongst 40 retail butchers in Melbourne. Whole midloins are purchased with the *M. longissimus dorsi* (LD) removed and measured for tenderness, using the Warner Bratzler (WB) Shear Blade (Bouton et al. 1971), meat colour and muscle pH. From studies conducted in October 1991, March and May 1992, a total of 246 LD muscles have been evaluated.

Carcass weight range (kg)	WB Shear force value (kg)			Average
	18-20	20-22	22-26	
Time of Sampling				
October 1991	3.23 ^{ab}	3.25	2.78 ^{ab}	3.09 ^{ab}
March 1992	2.99 ^a	2.83	2.79	2.87 ^a
May 1992	3.67 ^b	2.92	3.54 ^b	3.38 ^b
Average	3.30	3.00	3.04	
Ageing period (days)				
2	4.25 ^a	3.88 ^a	3.81 ^a	3.98 ^a
3	3.37 ^b	3.33 ^a	4.00 ^a	3.56 ^a
5	3.10 ^b	2.96 ^a	2.51 ^b	2.86 ^b
6	2.93 ^b	2.43 ^b	3.19 ^{ab}	2.85 ^b

a,b : means within columns with different letters differ $P < 0.05$

Although tenderness was not affected ($P < 0.05$) by lamb carcass size, time of sampling was found to be a significant factor. Tenderness of lamb significantly improved after ageing carcasses for five days. However, 42% of LD muscles sampled had been aged for two days prior to assessment for tenderness.

This study has shown that lamb carcass weight does not affect eating quality. Rather, retail butchers may need to modify their management practices of lamb carcasses to ensure that high quality lamb cuts are available to consumers.

BOUTON, P.E, HARRIS, P.V and SHORTHOSE, W.R. (1971). *J.Food Sci.* 38: 816.
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