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ADJUSTMENT OF THE MEASUREMENT OF BEEF CARCASS EYE MUSCLE AREA FOR RIB SITE

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Use of Eye Muscle Area for prediction of saleable beef yield or portion control is impracticable. This is because eye muscle area varies systematically along its length and the area of this muscle is often measured at different rib sites. The use of different sites is a practical requirement of customers who demand different carcass cutting lines to increase the value of their product in different markets. For eye muscle area measurements to be practically useful, it is necessary to know the relationship between the muscle area measured at different sites. This will allow the area to be adjusted to a common rib site for the purpose of comparison.

The area of the eye muscle was traced and later measured at 3 rib sites (4/5th, 10/11th and 12/13th) of 241 steers boned out for the Southern Crossbreeding and J.S. Davies Gene Mapping Projects (Ewers *et al.* 1999). Data were analysed using an animal model with SAS Proc Mixed. The robustness of the adjustments were tested using SAS Proc GLM with breed, measures of carcass size and musculature.

It was found that area differences were consistent across breed, carcass size and muscularity. Furthermore these adjustments could be defined as simple percentage differences from any rib site (Table 1). The longitudinal shape of the muscle can be seen in Figure 1 and has been compared to the work of Baud *et al.* (1998).

Table 1. EMA and percent adjustments for different rib sites

Rib site	EMA (cm^2)	Proportion of area at the $10/11^{th}$ rib site (%)
4/5th	18	24
5/6 th	26	35
6/7 th	36	48
7/8 th	48	63
8/9 th	59	78
9/10 th	69	91
10/11 th	75	100
11/12 th	78	104
12/13 th	77	102

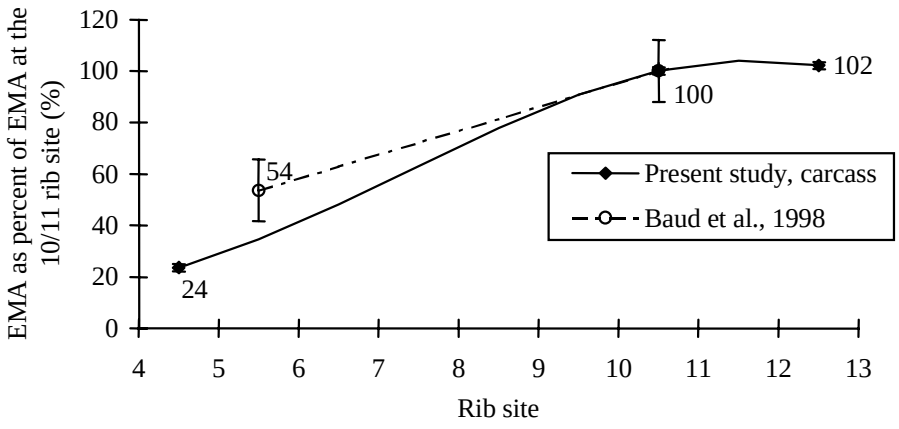

Figure 1. Longitudinal shape of the eye muscle, comparison with Baud *et al.* (1998)

BAUD, S., WADE, C.M. and GODDARD, M.E. (1998). *Aust. J. Agric. Res.* **49**, 285-91.
EWERS, A., PITCHFORD, W., DELAND, M., RUTLEY, D. and PONZONI, R. (1999). SARDI Research Report

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