

THE INFLUENCE OF DIET AND GROWTH RATE ON THE
COMPOSITION OF THE 9-10-11th RIBCUT

G.D. TUDOR* and D.W. UTTING*

Purchas and Davies (1974) demonstrated alterations in carcass fat between cattle fed either high grain diets or pasture. However the effect on composition was confounded by a diet and growth rate interaction.

The influence on the composition of the 9-10-11th ribcut (RC) (Table 1) of fattening 24 Hereford steers either grazing a Rhodes grass pasture (P), or individually fed a high grain (G) diet (90% sorghum, 10% chaff), either to appetite (GA), or restricted (GR) to attain comparable growth rates as the P group, was examined. The steers were about 18 months of age and were randomly allocated on a fasted liveweight basis into three groups of eight. They were slaughtered when they attained a liveweight of 390 kg.

TABLE 1: The influence of diet and growth on the composition of the 9-10-11th ribcut.

Treatment	LW gain (kg)	Final LW (kg)	Hot carcass (kg)	Daily gain (kg/d)	RC composition		
					Water %	Fat %	Protein %
P	179.3	369.2	198.4	0.59	55.5	28.0	16.2
GA	175.7	373.7	217.0	0.82	46.0	39.8	14.0
GR	186.1	378.2	219.1	0.56	52.2	32.7	14.8
LSD 5%	8.77	6.67	9.99	0.24	5.41	7.01	1.94

Although the differences in daily gain between the three treatments were only significant ($P < 0.05$) between the two grain fed groups, the lack of significance between the GA and P group is probably due to the slow gain of two steers in the GA group (0.4 kg/d). If these two steers were left out of the daily gain analyses, the mean daily gain for the group was $0.97 \pm \text{SE } 0.09$ kg/d.

The significant difference in the water and fat components of the ribcuts between the fast (GA) and slow (GR) grain fed steers suggests that this difference is probably due to growth rate as it has been shown that increased energy intake tends to produce fatter carcasses (Waldman, Tyler and Brungardt 1971). The difference between the GA and P groups is probably also due to growth rate as there was no obvious dietary effect between the two groups (GR v. P) grown at the same rate. The higher water and lower fat content of the ribcut in the P group is probably due to the significantly ($P < 0.01$) lower carcass weights in the P group compared with the GR group.

PURCHAS, R.W. and DAVIES, H. LLOYD (1974). Aust. J. agric. Res. 25: 183.

WALDMAN, R.C., TYLER, W.J. and BRUNGARDT, V.H. (1971). J. Anim. Sci. 32: 611,

*Animal Research Institute, Department of Primary Industries, Yeerongpilly, Queensland, 4105.