

## FEEDLOT PERFORMANCE AND CARCASS CHARACTERISTICS OF PIEDMONTESE-AND WAGYU-HEREFORD CATTLE AT TWENTY MONTHS OF AGE

W.D. HOFFMAN<sup>A</sup>, H. HEARNshaw<sup>B</sup>, L.M. CAFE<sup>B</sup>, D.W. HENNESSY<sup>B</sup>, P. KAMPHORST<sup>C</sup>, S. MCCLELLAN<sup>D</sup>, A. RAYNER<sup>C</sup> and P.L. GREENWOOD<sup>D</sup>

Cooperative Research Centre for Cattle and Beef Quality, University of New England, Armidale, NSW 2351

<sup>A</sup> NSW Agriculture, Casino, NSW 2470

<sup>B</sup> NSW Agriculture Research and Advisory Station, Grafton, NSW 2460

<sup>C</sup> NSW Agriculture Research and Advisory Station, Glen Innes, NSW 2370

<sup>D</sup> NSW Agriculture Beef Industry Centre, University of New England, Armidale, 2351

Piedmontese-Hereford (PxH) and Wagyu-Hereford (WxH) calves (n=257) were born in 2001 and reared to weaning at Grafton Agricultural Research Station on different *in utero* and preweaning levels of nutrition. Following weaning, 80 steers and 80 heifers were selected to represent divergent birth weight and preweaning growth rates, and these 'core' cattle were sent to Glen Innes for growing out on pasture prior to feedlot entry (Hearnshaw *et al.* 2004). The remaining 94 steers and heifers (intermediate in birth weight and preweaning growth rates) were also grown out on pasture at Glen Innes. In March 2003, the 94 head were weighed and assessed for muscling and fatness and consigned to a feedlot at Warwick, Queensland for finishing for 60 days. This paper presents the growth rates of these PxH and WxH heifers and steers during the feedlot finishing phase, and carcass and yield data following slaughter at either Brismeat abattoir (Woolworths, Qld, n=44 steers) or at Casino abattoir (n=19 heifers and 31 steers). Data were analysed using Linear Mixed Models in Genstat, with significance accepted at P<0.05.

Table 1 gives liveweight and body composition of heifers and steers prior to entering the feedlot, and gains at the feedlot. Following 60 days in the feedlot, an 'even' line of 44 steers that averaged 447 kg liveweight were selected and slaughtered at Brismeat. Data on hot weights, dressing percent, eye muscle area, and estimated yield were collected. The PxH steers had heavier carcasses (258 v. 243 kg), 2% greater dressing % and estimated lean meat yield, and were leaner than the WxH steers (8 v. 11 mm P8 fat).

**Table 1. Liveweight and body composition of 94 Piedmontese-Hereford (PxH) and Wagyu-Hereford (WxH) steers and heifers at the end of the pasture grazing phase (19 months of age), and growth (ADG) during the 60 day feedlot finishing phase.**

Genotype (G)	Sex (S)	Liveweight (kg) off pasture	Scan P8 fat off pasture (mm)	Scan rib fat off pasture (mm)	Last weight in feedlot (kg)	ADG (g) in feedlot for 60 d
PxH	Heifer	342	5.4	3.5	426	1695
WxH	Heifer	333	6.7	4.2	414	1603
PxH	Steer	361	5.0	3.1	460	1965
WxH	Steer	347	6.3	3.9	448	1895
Av. sed		14.2	0.51	0.42	15.5	11.5
Sig. effects		G, S (P<0.1)	G	G	S	S

The remaining 50 cattle were slaughtered at Casino. Steers slaughtered at Casino averaged 462 kg liveweight, with PxH steers having heavier and leaner carcasses (253 v. 241 kg with 8 v. 12 mm P8 fat), greater dressing percent, muscling and commercial meat yield (74.3 v. 70%), and less bone and fat waste than WxH steers. The MSA assessment indicated that WxH steers had slightly higher ossification score than PxH steers, but significantly more marbling (403 v. 319 for US marbling score, and 1.1 v. 0.4 for Australian marbling score). Ultimate pH, meat and fat colour were similar for the 2 genotypes. Heifers averaged 420 kg liveweight following feedlotting, and showed the same trends in carcass and yield traits as the steers.

HEARNshaw, H., CAFÉ, L.M., HENNESSY, D.W., WOLCOTT, M., KAMPHORST, P., GREENWOOD, P.L. and HARPER, G.S. (2004). *Anim. Prod. Aust.* **25**, (This proceedings).

Email: bill.hoffman@agric.nsw.gov.au