

THE PERFORMANCE OF SINGLE- AND TWIN-REARED SUCKLED CALVES

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Single-suckling beef cows can produce an average of 10 kg milk/day for several months. Attempts to improve calf performance by increasing milk production beyond this level are likely to result in only very small increases in rate of calf live-weight gain. From about 6 weeks of age, calves with a restricted intake of milk will eat more solid food than those consuming larger quantities of milk, although the additional solid food intake is unlikely to compensate fully for the difference in milk intake. These factors suggest that there may be advantages to be gained from the twin-suckling of beef calves as a means of increasing substantially the output of weaned calf per cow and thereby reducing the cow overhead costs per kg weaned calf.

An experiment was conducted to compare the performance of calves reared as either singles or twins by two genotypes of suckler cows grazing a ryegrass pasture from mid-May to mid-September. Twelve Hereford × Friesian cows reared 9 single-suckled and 6 twin-suckled calves, and 14 Blue Grey (White Shorthorn × Galloway) cows reared 8 single-suckled and 12 twin-suckled calves. The calves were all sired by Charolais bulls and were born during March and April. All calves were single-born and were fostered within genotypes; no cow reared her own calf.

The grazing season in which the experiment was conducted was characterised by a shortage of pasture

and, as a consequence, the levels of performance, summarised in Table 1, were lower than normal.

The results indicate that cows rearing twins produced more milk than those rearing singles and that calf performance was influenced by both cow genotype and rearing type. The difference in live weight at turnout between single- and twin-reared calves from Hereford × Friesian cows was relatively small (less than 4 kg) and less than that in the calves from Blue Grey cows (more than 11 kg). At pasture, single-reared calves grew more quickly than those reared as twins and those from Hereford × Friesian cows grew more quickly than those from Blue Grey dams. The final weights of Hereford × Friesian cross and Blue Grey cross twin-reared calves were 0.83 and 0.81 times the weights of the respective single-reared calves.

The combined effects of differences in calf weight at turnout and in growth rate at pasture resulted in the twin-reared Hereford × Friesian cross calves and single-reared Blue Grey cross calves having very similar live weights at the conclusion of the experiment. In both genotypes, the weight of calf reared per cow was increased by a factor of more than 0.6 by double suckling.

In commercial practice, the creation of twin pairs by fostering would require calves to be purchased with the attendant risk of disease problems. As an alternative to

TABLE 1

The performance at pasture of single- and twin-reared calves of two genotypes (with standard errors of means in parentheses)

Genotype of foster-dam	Hereford × Friesian		Blue Grey	
	Single	Twin	Single	Twin
Rearing type				
Milk production (kg/day)	9.7 (±0.67)	11.3 (±0.37)	8.2 (±0.68)	9.2 (±0.78)
Calf weight at turnout (kg)	82 (±4.8)	78 (±5.8)	70 (±5.2)	58 (±4.1)
Calf weight in September (kg)	205 (±9.1)	170 (±13.1)	173 (±9.7)	140 (±9.2)
Calf weight gain at pasture (kg/day)	1.01(±0.049)	0.75 (±0.079)	0.84(±0.052)	0.67(±0.056)

fostering, embryo transfer offers a means of producing twin pregnancies in a substantial proportion of cows in a herd but has the disadvantages of being relatively expensive and requiring the synchronisation of donor and recipient animals. The induction of twinning by

immunological techniques, such as has recently been used with success in sheep to increase lambing percentage, would constitute a major advance in beef production and lead to substantial increases in the return from suckler cow enterprises.