

# EFFECT OF ZERANOL IMPLANTS ON GROWTH AND CARCASS CHARACTERISTICS OF EARLY-SUMMER-BORN SUCKLING CALVES IN NORTH-EASTERN VICTORIA

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On annual pasture in north-eastern Victoria it is profitable to produce beef calves for slaughter from early-summer-calving cows (Hamilton and Seirer, unpublished data). The value of zeranol (Ralgro) implants in this enterprise was examined in 1983 and 1984, using 16 Angus steer calves per year, paired on similarity of age and live weight and allotted at random from each pair to a control or implant treatment. An implant was made three months before slaughter in 1983 and six and three months before slaughter in 1984. The animals for each allotment pair were kept on a separate plot, stocked at 0.8 cows and calves per ha, and were slaughtered at the end of October, when 10 months old on average. Anthelmintic was given to the cows three times a year and to the calves twice.

Chilled carcass weight was assessed as 97% of hot weight and thickness of fat cover as the mean of two measurements taken between the 10th and 11 th ribs on half of each carcass. Within each allotment pair, chilled carcass weight was corrected for any slight difference in initial live weight between the two calves. Half of this difference was added to or deducted, as appropriate, from final live weight, and then chilled carcass weight was multiplied by this corrected final live weight over actual.

Table 1 Live weight change and carcass characteristics of the calves

| Year     | Implant number | Weight change (kg/d) |        | Chilled carcass weight (kg) |        | Fat thickness (mm) |        |     |
|----------|----------------|----------------------|--------|-----------------------------|--------|--------------------|--------|-----|
|          |                | Control              | Ralgro | Control                     | Ralgro | Control            | Ralgro |     |
| 1983     | 1              | 0.98 *               | 1.27   | 182.5 *                     | 193.4  | 8.0                | ns     | 6.7 |
| 1984     | 1              | 0.74 ns              | 0.82   | -                           | -      | -                  | -      | -   |
|          | 2              | 1.10 *               | 1.24   | 187.6 ns                    | 199.9  | 9.8                | ns     | 8.1 |
| LSD (5%) |                | 0.15                 |        | 10.9                        |        | 1.9                |        |     |
|          |                | 0.25                 |        | -                           |        | -                  |        |     |
|          |                | 0.12                 |        | 15.8                        |        | 3.0                |        |     |

A trend each year was for growth rate and carcass weight to be increased and fat thickness to be decreased as a result of the implant (Table 1). However, the only significant differences were in growth rate during the three months before slaughter in each year and in carcass weight in 1983.

The improvement in growth rate of 30 and 13% in the respective years compares with improvements in growth rate of 6% from two implants to autumn-born calves recorded by Sully (1982) and 11 to 35% for steers of various ages reported by Wood and Bonner (1982).

On current values the 1983 result provides about a tenfold return on the \$2-50 cost of an implant pellet.

SULLY, R.J. (1982). *Proc. Aust. Soc. Anim. Prod.* 14:604.

WOOD, A.D. and BONNER, J.M. (1982). *Proc. Aust. Soc. Anim. Prod.* 14:620.