EVALUATION OF CIDR DEVICES FOR CONTROLLED BREEDING OF SHEEP

S.T. DAVE

Controlled internal drug releasing (CIDR) devices developed in New Zealand (R.A.S. Welch, pers. comm.) were compared with 60mg MAP sponges (Upjohn Pty. Ltd.) for the induction of fertile oestrus in Border Leicester x Merino ewes in spring.

Sponges (150 ewes) and CIDR devices (100 ewes) were inserted on 13.10.83 and Pregnant Mare Serum (600 i.u.) was given at removal on 25.10.83. Treated groups were joined to 10% rams on 26.10.83 for one week (cycle 1) and again on 10.11.83 (cycle 2). Untreated control ewes (100) were joined to 2% rams on 14.10.83 for six weeks.

At cycle 1, 80% of MAP and 93% of CIDR ewes mated (p<0.01), and of those 65% and 60% lambed with litter sizes of 2.22 and 1.89 (p<0.05). Of those mated at cycle 2, 87% and 81% lambed, giving totals of 92% and 90% lambed to both cycles with means of 1.69 and 1.46 lambs born per ewe treated. By the end of cycle 1, 10% of control ewes were mated, 40% by cycle 2 and 90% within the next week.

The CIDR device was effective in inducing fertile oestrus. The better oestrus response at cycle 1 needs more study. Boland et al. (1983) found a lower ovulation rate with CIDR than with another progestagen and this is supported by the lower and more practical litter size here.


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THE GRAZPLAN PACKAGE FOR FARM MANAGEMENT

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Farmers are often confronted with management decisions, such as choice of animal type, pasture species or time of lambing or calving, which may have long-term effects on farm productivity. The GRAZPLAN management package is designed to help farmers make these decisions and to provide a link between research and its application to farming practice. The core of this package is the GRAZPLAN management model which has been developed to predict the financial effects of different management strategies. This model was originally designed to simulate prime lamb production and has recently been modified to deal with either wool production in mixed ewe and wether flocks or a beef enterprise, using the same computer program. Further extensions to dairy production and grain cropping are planned.

The biological component of the model is made up of a number of sub-models simulating pasture growth, animal nutrition and reproduction. A management section allows a wide range of options to be tested including fertilizer application, stocking rate, supplementary feeding, mating date and conservation. The program searches for the most profitable combination of strategies to give the highest returns in $/ha. The model thereby provides a means of examining the effects of alternative policies on the whole farm enterprise under different seasonal conditions.

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