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TECHNIQUES OF ADMINISTERING PROGESTAGENS FOR OESTRUS SYNCHRONIZATION IN CATTLE

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Until recently there have been two major practical problems with the use of progestagens for oestrus synchronization in cattle: (1) Lack of a suitable method for continuous administration, and (2) a variable and generally lower fertility at the synchronized oestrus. Both these problems have now been overcome. The development of the PRID (a stainless steel spiral coated with silastic rubber that has been impregnated with progesterone) provides a satisfactory means of administration through the intravaginal route, and the Synchromate B ear implant provides a suitable subcutaneous method. Both these devices are easy to administer and remove and have very low loss rates. The problem of variable fertility has to some extent been overcome by the shortening of the period of treatment from 21 days to 9-12 days. To achieve effective synchronization with this short-term treatment it is necessary to administer oestrogen at the time of inserting the progestagen device. Other factors, however, such as the nutritional status of the animals being treated, the fertility of the

TABLE 1: PERCENTAGE OF COWS CALVING FOLLOWING OESTRUS SYNCHRONIZATION AND ARTIFICIAL INSEMINATION

<i>Trial</i>	<i>Treatment</i>	<i>Mating</i>	<i>Number of Cows</i>	<i>% Calving¹</i>
HopúHopu (Angus heifers)	PRID (10 day)	AI 56 h ²	40	60
	PRID (20 day)	AI 56 h	40	38
Crater (Angus cows)	PRID (10 day)	AI 56 h	131	55
	PRID (10 day) + PMSG	AI 56 h	129	47
Haldon (Hereford cows)	Control	NM 21 days ³	114	50
	PRID (10 day) + PMSG	AI 56 h	69	48
	Ear implant (10 day)	AI 48 h	60	48
	Prostaglandin (Double injection)	2 × AI 72 & 96 h	63	19
	Control	AI 21 days ³	74	43

¹ Based on actual numbers of cows calved.

² Single insemination on a time basis after device withdrawal.

³ 21 days of natural mating or AI on detection of oestrus.

bull and the competence of the inseminator, still exert the major influences over the outcome of any synchronization programme.

Results of some New Zealand trials are presented in Table 1. These show the benefit of the short-term treatment and that conception rates to a single insemination on a time basis are equal to those obtained for natural mating or AI over 21 days in untreated cows.

The practicality of the system is illustrated by New Zealand data where 400 cows were treated and inseminated in a total of 60 man-hours. This included time taken in mustering and drafting and involved the animals being put through the yards three times in 12 days. In one trial 230 cows were inseminated in 3 hours. The use of such a programme produces considerable savings in time, labour and specific feed requirements in comparison with those involved in a non-synchronized AI programme. Thus these techniques can greatly facilitate the use of AI in beef cattle. Such treatments, however, must be considered only as adjuncts to good management as their use under suboptimal conditions, such as poor nutrition, can only result in failure.

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