

SYNCHRONIZATION OF OESTRUS IN COWS USING INTRAVAGINAL SILASTIC COILS CONTAINING PROGESTERONE

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Progesterone, given by silastic implant or pessary for 18 or 20 days will synchronize oestrus but fertility to AI at the controlled heat is lower than normal (SREENAN, 1972 ; ROCHE, 1974 *a*). Reducing the period of administration of progesterone down to 10 days by giving an injection of 5 mg oestradiol benzoate at time of insertion of implants, increased fertility but less heifers showed a synchronized heat (ROCHE, 1974 *b*). Injecting 50 mg of progesterone with the 5 mg oestradiol benzoate given at time of insertion of implants increased the oestrous response to a 10-day progesterone treatment without affecting fertility (ROCHE, 1974 *b*). To facilitate large scale farm trials, intravaginal silastic coils consisting of stainless steel strips coated in silastic rubber were impregnated with progesterone. Both retention rate and synchronizing efficiency were high.

Farm trials were conducted using silastic coils for 12 days with an injection of 5 mg oestradiol benzoate and 50 mg progesterone given at time of insertion of coils. Of 367 Friesian dairy cows treated, coils were retained in 340. Of these 340 cows, 310 were observed in oestrus 2 to 6 days post-removal of the coils and were inseminated once with frozen semen. Fertility, based on pregnancy diagnosis or on 150-day non-return rates, was not different between treated and similar control cows in the same herds.

Injecting 100 µg GnRH (Abbott Labs) 30 hours after removal of the silastic coils following the 12-day progesterone treatment resulted in 66 p. 100 of animals ovulating 30 hours post GnRH while 90 p. 100 had ovulated at 35 hours post GnRH. Fertility, following a fixed time insemination at 48 hours with GnRH or at 56 and 74 hours without GnRH is not significantly different from controls. Thus, it appears that silastic coils impregnated with progesterone and inserted for 12 days with the oestrogen-progesterone injection given at time of insertion, give high synchronization rate, result in normal fertility and will allow animals to be inseminated on a fixed time basis with or without GnRH.

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RÉSUMÉ

SYNCHRONISATION DE L'ŒSTRUS CHEZ LA VACHE
GRACE A UN SERPENTIN DE SILASTIQUE CONTENANT DE LA PROGESTÉRONNE

Sur 340 vaches, on a obtenu une fertilité normale et une bonne synchronisation des œstrus (91 p. 100 en 4 jours), en injectant 5 mg de benzoate d'œstradiol et 50 mg de progestéronne le jour de la mise en place vaginale d'un serpentín de silastique imprégné de progestéronne qu'on retire 12 jours plus tard.

RÉFÉRENCES

- ROCHE J. F., 1974 a. Synchronization of œstrus in heifers with implants of progesterone. *J. Reprod. Fert.*, **41**, 337-344.
- ROCHE J. F., 1974 b. Effect of short-term progesterone treatment on oestrous response and fertility in heifers. *J. Reprod. Fert.*, **40**, 433-440.
- SREENAN J., 1972. Induction and synchronization of œstrus in hill suckler cows. *Res. Rep.*, 1972, p. 162. *Anim. Prod.* An Foras Taluntais.
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