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## The responses of lactating dairy cows treated for Anoestrus to an Oestradiol capsule and an Oestradiol injection

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### INTRODUCTION

Postpartum anovulatory anoestrus is a major form of infertility among cows in dairy herds in New Zealand. The currently recommended treatment involves a 5-day priming with progesterone (P4) released from a CIDR™ device (InterAg, NZ), with a 10 mg gelatin of oestradiol benzoate (ODB) and 1 g lactose capsule (CIDR™; InterAg, NZ) placed in the grooved surface of the device preceding device insertion, and an injection of ODB (CIDIROL™; InterAg, NZ) given intramuscularly at 24 to 48h following device removal.

The objectives of the trial were to quantify the effects of the ODB capsule at the initiation of the priming period and varying the injected dose of ODB after device removal, on the occurrence and timing of oestrus and on the fertility of the synchronised oestrus.

### MATERIALS AND METHODS

A total of 591 cows comprising from 17-120 cows of mixed age and breed (F, J, FxJ) in each of 10 herds were initially examined and diagnosed as anoestrus during the week preceding the first date of each herd's seasonal breeding programme. When the CIDR device was inserted into the vagina of each cow, half the animals in each herd also received an ODB capsule (+CAP). The other half received no capsule (-ODB). The device was removed 6 days later. On the seventh day (24h after device removal), half the animals in each herd received either an injection of 0.75 or 1.00 mg ODB in oil (0.75 INJ:1.00 INJ) so that numbers were approximately balanced in each herd in a 2x2 design. Each animal was inseminated on detection of oestrus.

A second veterinary examination was made in each herd 14 days from CIDR removal to differentially diagnose and treat all non-inseminated animals either as ovulating without being detected in oestrus, or as still remaining anoestrus. All animals were pregnancy tested to confirm dates of conception.

### RESULTS

Most animals were inseminated at around 48h to 72h of device removal and this percentage did not differ among treatments (Fig. 1) Within 48h of CIDR device removal, 57.4% of the (+CAP/1.00 INJ) cows had been inseminated compared to 56.6% of the (-CAP/1.00 INJ) cows.

Similarly, 48.0% of the (+CAP/0.75 INJ) cows have been inseminated compared to 52.3% of the (-CAP/0.75 INJ) animals. By 14 days, the comparable figures were 87.2, 90.2, 85.5 and 91.9% respectively (p>0.10). The

FIGURE 1: Synchrony pattern to 1st insemination following treatments for anoestrus.

