



## Rochester Veterinary Practice - Client Information Sheet

### **Synchronisation Programs for Dairy Cows 2012**

Synchronisation programs bring cows into heat in a concentrated period of time. This is best achieved through the use of prostaglandin (PG), progesterone (CIDR/Cuemate) or GnRH (Ovsynch) or a combination of these drugs. Every herd is different so we recommend that you speak to one of the vets and select a program that best suits your needs.

#### **Prostaglandin (PG)**

The cost of prostaglandin is **\$1.90\*** per dose. Prostaglandin only works on cows that have active ovaries and are already cycling. Cows are less likely to respond to PG if they calved in poor condition, have been calved less than 6 weeks at the time of treatment or if they are first-calvers.

**Prostaglandin will abort cows that are less than 3 months pregnant. It is important that autumn calving cows and carryover cows are definitely empty before they are given PG.**

About 2/3 of cows that are cycling will come into heat in the five days following an injection of PG. Whether or not a cow comes into heat after an injection of PG depends on the stage of the cycle. Cows that have had a heat in the previous 7 days usually will not respond to an injection of PG. Conception rates in PG programs are equal to conception rates following natural heats and may even be slightly higher.

Using PG in any of the following programs will help to identify cows that aren't cycling earlier and allow you to plan treating them earlier.

**The success of prostaglandin programs depends on good heat detection. It is important to use intensive paddock observation as well as heat detection aids such as tail paint or Kamars.**

#### **1. Double PG injection**

All cows are injected twice 11-14 days apart. The first injection is given 16 days before the start of mating and the second injection is given 2 days before mating starts. Nearly all cows that have active ovaries will come on heat in the 7 days following the second injection.

This system has given us good results especially when used with Kamars or Oestrus Alerts to aid heat detection.

#### Advantages

- ❖ Heat detection is concentrated over 4 or 5 days
- ❖ Two rounds of AI for most cows in a 4 week period
- ❖ Heat detection prior to mating is recommended but is not vital
- ❖ All cows are injected – no need for separate groups
- ❖ Non-cycling cows are identified early on in the joining period
- ❖ First injection of PG means more heats before the start of mating which may lead to increased fertility
- ❖ Works well with OvSynch or CIDR-synch to get all cows joined in first 21 days of mating

#### Disadvantages

- ❖ Very concentrated period of calving and joining – can be overwhelming

## 2. The 6 day injection program (why wait)

Cows are observed for heat and are inseminated as they are detected on heat for 6 days. About 25% of cows should be submitted in this period. The remainder are injected with prostaglandin on day 6 after mating starts and inseminated as they come into season over the next 5 or 6 days. This should allow all cycling animals to come on heat within 12 days.

### Advantages

- ❖ Fewer doses of PG are required
- ❖ Heat detection is concentrated over 12 days

### Disadvantages

- ❖ Separate groups are required – not all cows are injected
- ❖ No extra heats prior to the start of mating
- ❖ Does not work well with OvSynch or CIDR-synch to get all cows joined in first 21 days of mating

## 3. PG all cows 21 days before mating

All cows are injected 21 days before mating and all heats are recorded. The second heat after the PG injection coincides with the start of mating.

### Advantages

- ❖ Simple and easy
- ❖ Cows have pre-mating heat to increase fertility
- ❖ Relatively cheap
- ❖ Heats (and calving) not quite as concentrated as when double PG program used
- ❖ Non-cycling cows identified at the start of mating
- ❖ Doesn't put eggs all in one basket as with double PG program – heats are more spread out
- ❖ Works OK with OvSynch and CIDR-synch to get all cows joined in first 21 days of mating

### Disadvantages

- ❖ None

Injecting large numbers of cows is easier with a vaccinator gun and “flexiject” flexible tubing

## CIDR-synch

Cows can also be synchronised with CIDR's or Cue-Mates that release the hormone progesterone when inserted into the vagina. CIDR-synch plus Pregnecol is the best program to use on non-cycling cows

### **Cidirol is no longer available for use in lactating dairy cattle.**

CIDR-Synch is a new program where GnRH (Gonabreed) is used instead of cidirol. CIDR-Synch is a slightly shorter program than CIDR-cidirol and uses fixed time insemination rather than relying on heat detection. CIDR-Synch is more expensive than the old CIDR-cidirol program (\$27.09\* per cow for < 50 cows and \$25.05\* per cow for > 50 cows). If Cue-Mates are used the cost is lowered by \$1.50 per cow.

CIDR-Synch is the same as OvSynch except that CIDR's are used between the first injection of Gonabreed and the injection of PG.

### Advantages

- ❖ All cows are inseminated at a fixed time – heat detection is not necessary
- ❖ If combined with Pregnecol conception rates are as good as those in normal cycling cows

### Disadvantages

- ❖ Expensive

- ❖ Fiddly and time consuming to insert CIDR and inject Gonabreed and PG in to every cow

## Ovsynch

The Ovsynch program uses the hormone GnRH (Gonabreed or Receptal) and PG.

<b>Day 0</b>	1 ml GnRH	am
<b>Day 7</b>	2ml PG	am
<b>Day 9</b>	1 ml GnRH	pm
<b>Day 10</b>	fixed time AI	am

The Ovsynch program will synchronise cycling cows and some non-cycling cows. The main benefit is that no heat detection is required for the first insemination. This program is particularly useful if heat detection is identified as a problem. All cows are blanket inseminated whether or not they are showing signs of standing heat. There are a number of short cycles following the fixed time insemination and cows should be inseminated on these heats. Good heat detection is vital immediately following the fixed time insemination. OvSynch costs **\$11.14\*** per cow <50 cows and **\$9.10\*** per cow > 50 cows.

If Ovsynch programs are used to synchronise cows following a PG treatment the timing of the start of the Ovsynch program is important. Cows will be at the right stage of the cycle if the Ovsynch program starts 11 or 12 days after the last treatment with PG

### Advantages

- Relatively easy to administer – all cows are treated
- Heat detection not required for first insemination
- A proportion of non-cycling cows will respond to treatment

### Disadvantages

- Uses a lot of semen per calf
- Conception rates to first insemination low but normal in subsequent heats

## Ovsynch + Pregnecol

The addition of Pregnecol (ECG) to the Ovsynch program on Day 7 with PG improves pregnancy rates especially in fresh cows and in older cows (>5 years old).

Pregnecol comes as a powder in a 15-dose pack and a 50-dose pack. Once it is mixed up it needs to be used straight away. It is not advisable to store it for future use.

Pregnecol costs **\$6.59** per dose in a 15 cow pack and **\$5.10** per dose in a 50 cow pack

**Remember that a synchronisation program relies on good heat detection and good AI technique in order to be successful**

\*All prices include GST