Dairy Australia
InCalf
Your Levy at Work

Guide to synchrony programs for dairy herds

This short guide to synchrony methods is designed to help you when discussing programs suitable for your farm with your veterinarian.

Reproductive advice and synchrony programs should be tailored to each herd's needs. There are many different oestrus synchrony methods in common use in lactating cows. This document does not describe synchrony programs for heifers.

It outlines the pros and cons of the different synchrony programs in terms of costs, resources required, complexity of management and outcomes.

This guide provides only a broad overview of the main synchrony methods used in Australian dairy herds. There are many other synchrony methods that involve minor modifications of these programs however the essential components remain the same.

Most of the methods outlined involve administration of S4 drugs that are available only on veterinary prescription so seek advice from your veterinarian before deciding on a program. Always follow the label directions on any veterinary drugs and observe all drug withholding periods for meat and milk.

Achieving good results

All these programs work better when:

- Cows are cycling i.e. a low proportion of non-cycling cows in the herd
- The time from calving to mating start date is longer (but not extended)
- Cows are not 'repeat breeders' (i.e. cows with fewer than 3 previous matings since calving)
- Labour is well organised and responsibility for the synchrony program is clearly defined
- Planning for the program occurs several weeks before the program starts
- Semen is highly fertile (check the bulls or AI semen you are using before starting)
- Inseminators are well skilled and able to inseminate the required number of cows
- You have suitable facilities for injection and insemination of cows

Submission rate targets

To achieve high herd reproductive performance aim for seasonal and split calving herds:

- 21 day submission rates greater than 85% for all cows and
- greater than 92% for early calved mature cows (cows that are 4 years or older and have been calved for 42 days or more)

Year round calving herds

- 80 day submission rates of greater than 73% for all cows and
- greater than 76% for cows 4 years or older

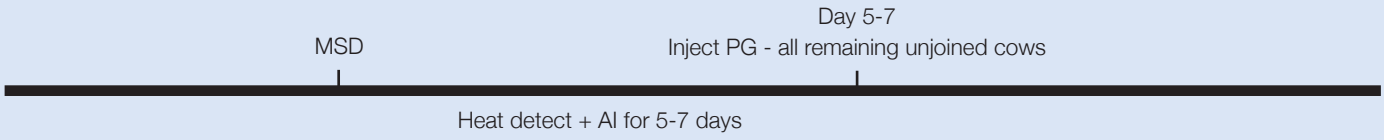
Program	Brief description	Cost	Complexity	Comments
The Monday program (YRC herds)	All cows past voluntary wait period (VWP) and not mated are injected with PG on a routine morning every 14 days eg. Monday. Cows that do not come on heat are injected 14 days later. DO NOT PG MATED COWS.	**Low** Approximate 1.5 PG doses $$	Simple	Can be combined with other treatment options eg. GnRH at mating. Only works on cycling cows
Modified Why wait PG (option 1)	Heat detect + AI for 5-7 days, then inject unjoined cows with PG and continue to heat detect	**Low** 1 PG dose $	Simple Only one injection, but you need to monitor heats.	Only works on cycling cows. Could Vet check any cows calved >30d which haven't cycled on day 14.
Modified Why wait PG (option 2)	Monitor herd for 5-7 days before mating start date (MSD), then inject all cows (except those showing a heat in the 5-7 days of monitoring) with PG. Inject those on heat in the 5-7 days monitoring with PG on day MSD +6.	**Low** 1 PG dose $$	Modest 1st mating can be condensed over 12 days. There are two injections and you need to monitor heats.	Only works on cycling cows. Could Vet check any cows calved >30d which haven't cycled on day 14.
Double PG	Before MSD at Day -14 inject all cows with PG and re-inject 2 days before MSD **or on MSD** (can be at 14 day intervals instead of 12).	**Low** 2 PG doses $$	Modest 1st mating could be condensed over 5-7 days. Two injections and you need to monitor heats.	Only works on cycling cows.
Ovsynch	Before MSD at Day –10 inject GnRH, Day –3 inject PG, Day –1 GnRH on PM before MSD (Day 0) AM mating.	**Moderate** $$$$	Higher than PG programs and needs to have accurate timing of treatments. Fixed time insemination simplifies and condenses mating.	Breed to fixed time. Good in YRC and seasonal or split herds. Will increase submission over PG only.
Enhanced Ovsynch	Before MSD at day –10 inject GnRH, Day –3 PG and eCG, Day –1 GnRH on PM before MSD (Day 0) AM mating.	**Moderate** $$$$	Higher than PG programs and needs to have accurate timing of treatments.	Breed to fixed time. Good in YRC and seasonal or split herds. May help if anoestrus is prevalent.
Progesterone Eazi-Breed™ CIDR® or Cue-mate® (P4 Device)	Before MSD at Day –10 insert P4 Device and inject with GnRH, remove P4 and inject PG Day –3, Day –1 GnRH on PM before MSD (Day 0) AM mating.	**High** $$$$$	Much higher than PG programs and needs to have accurate timing of insertions, removals, treatments. However, fixed time insemination simplifies and condenses mating.	Breed to fixed time. Will increase submission rates over PG only.
Enhanced Progesterone Eazi-Breed™ CIDR® or Cue-mate® (P4Device)	Before MSD at Day –10 insert P4 device and inject with GnRH, Day–3 remove P4 inject PG and eCG, Day –1 GnRH on PM before MSD (Day 0) AM mating. Similar for batching with voluntary wait period in YRC herds.	**High** $$$$$$	Higher than PG programs and needs to have accurate timing of insertions, removals, treatments. Fixed time insemination simplifies and condenses mating.	Breed to fixed time. Good in YRC and seasonal or split herds.
Pre-synch/Ovsynch*	Before MSD at Day -36 PG, Day -22 PG, Day -10 GnRH, Day -3 PG, Day -1 GnRH in the PM, MSD (Day 0) AM mating	**High** $$$$$$$	Higher than PG programs and needs to have very accurate timing of the large number of treatments.	Breed to fixed time. Not well suited to most seasonal or split herds, due to the long lag to start of the program. Probably increases conception rates to mating.

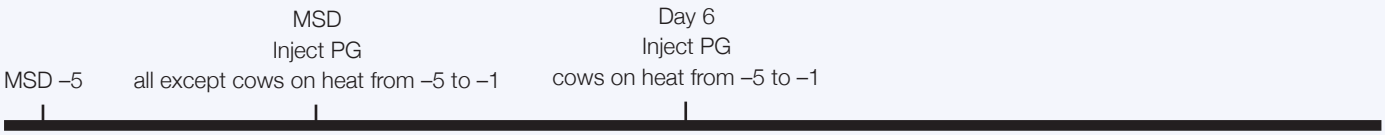
** A double PG program is shown here. Several other options are available*

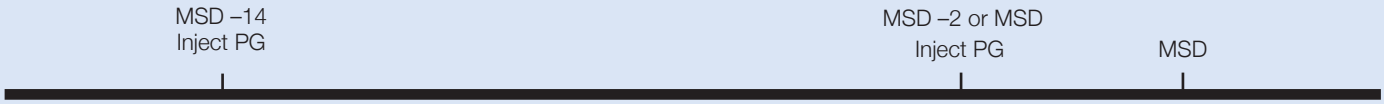
Abbreviations

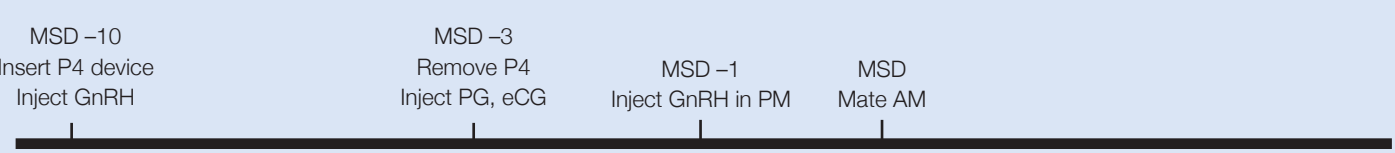
AM - morning
eCG - Equine chorionic gonadotropin
FTAI - Fixed time AI
GnRH - Gonadotropin releasing hormone
MSD - Mating start date
P4 Device - Intravaginal progesterone releasing device e.g. Eazi-Breed™ CIDR®, Cue-Mate®
PG - Prostaglandin
PM - afternoon
S4 - Schedule 4 drug
VWP - Voluntary waiting period
YRC - Year round calving

Cue-Mate® - Registered trademark Bayer Animal Health
Eazi-Breed™ CIDR® - Registered trademark Zoetis
Prosynch® - Registered trademark of Bayer Animal Health









There are numerous modifications to Ovsynch™ programs and the terminology can be confusing. Here is a guide to the commonly used terms associated with Fixed Time AI programs (FTAI).

Name	Meaning
Ovsynch, GPG	Refers to a standard Ovsynch program
Prosynch®, GPG-P4, Ovsynch + P4	Refers to the addition of a progesterone releasing device generally between the first GnRH injection and the PG injection
48,56,72	Adding a number at the end implies the number of hours after the final PG injection until the FTAI
Cosynch	FTAI is performed at the same time as the last GnRH injection. Generally a number representing the time since the PG is added eg in Cosynch72 the FTAI and GnRH occur together 72 hours after the PG injection
Resynch	Resynch programs involve early pregnancy diagnosis and re-synchrony of empty cows
Prosynch® Plus	Refers to the administration of eCG at the time of the PG injection during a Prosynch® program
Ovsynch Plus, Enhanced Ovsynch	Refers to the administration of eCG at the time of PG injection during an Ovsynch program
Pre-synch Ovsynch	Refers to a program that precedes the Ovsynch™ program aiming to increase the number of cows that ovulate to the first GnRH of Ovsynch. Can be one of several programs- double PG, Ovsynch, GnRH/PG presynch

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