

Breeding focus: Managing late-calving cows

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Almost 390,000 dairy cows (more than one-quarter of spring-calving Irish dairy cows) calved later than April 1 in 2019 and 2020. What's worse is that almost as many calved in May and June as in April. It is challenging enough to breed an April-calving cow in the first three weeks of the breeding season, and impossible if she calves in May or June.

Does it matter? Absolutely, because achieving a high level of reproductive efficiency in the dairy herd underpins profitable grass-based milk production.

Target submission rates of 90% of cows and 100% of maiden heifers bred in the first three weeks of the breeding season are both desirable and realistic. However, the national average in 2019 was only 71% of cows and 78% of heifers bred during this period.

The reproductive cycle of the cow requires a period of rest and recovery before she is able to go back in calf again. Estimates vary, but a rest period of around 30 days after calving is considered the absolute minimum before commencing a treatment programme.

Cows calving within four weeks of the start of the breeding season warrant special attention to help ensure that they go back in calf. Later calving cows are typically in better condi-

tion at calving, because they generally have an extended dry period.

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These cows also tend to be in calf to longer-gestation-length beef bulls and consequently are at greater risk of increased calving difficulty. This will in turn delay the resumption of the cycle required to allow them to be bred again.

Two strategies can shorten the interval between calving and breeding in such cows.

•**Once-A-Day (OAD) milking.** This approach is typically used on low SCC, late calving or thin (BCS <2.5) cows. It works on the principle that once a day milking reverses the trend towards body condition loss in early lactation, reducing milk yield (OAD typically results in 30% lower volume) compared to cows milked twice daily.

Late-calving cows are generally older, higher-yielding cows and thus more prone to rapid body condition loss after calving. Milking them once a day from calving speeds up the resumption of their reproductive cycle. They will also have a higher conception rate to first service.

Opinions vary as to when cows should revert to twice a day milking



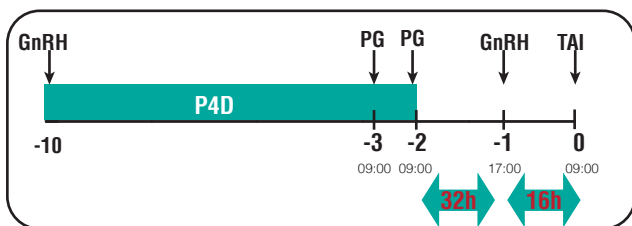
– some begin immediately after first service, while others wait until the cow has passed 'her three weeks'. Using the once-a-day milking approach, cows typically receive AI within 50 days of calving.

The loss in milk yield for a cow milked once a day for 40 to 60 days is approximately €55-€75.

•**The hormonal intervention approach.** Stephen Butler at Teagasc Moorepark has looked at a variety of hormonal treatments to induce heat in cows that have been calved 30 days or more, but are not cycling.

Details of the Teagasc Moorepark-

Promotes cyclicity in cows that are not yet cycling (should be >30 DIM at start of synch)
AI at fixed time, regardless of signs of heat



5 interventions
4 injections, 1 P4D
None in heat before sch.
TAI

GnRH: Gonadotropin releasing hormone (e.g. Ovarelin, Receptal)
PG: Prostaglandin F2a (e.g. Enzaprost, Estrumate, Lutalyse)
P4D: Progesterone device (e.g. CIDR, PRID)
TAI: Timed artificial insemination

Teagasc's virtual breeding week

Teagasc, in conjunction with the ICBF, will run a virtual breeding week starting on Monday 15 March. The podcasts, webinars and video clips released during the week will focus on the ways to achieve a high level of reproductive success and rapid genetic gain.



recommended protocol for synchronising heat in such cows are presented in Figure 1.

The advantage of the programme is that it promotes cyclicity in cows that are not yet naturally cyclic (however they should be 30 or more days calved

at the start of the synchronisation treatment) and they can be AI'd at a fixed time regardless of the signs of heat.

Careful adherence to the times of administering the prostaglandin and GnRH injections and AI at the end of

the protocol are absolutely critical to its success. Using this approach, late-calving cows are typically batched into groups and AI'd at an average of 45 days after calving. The treatment is approximately €40 per cow, excluding AI cost.

Breeding advice for spring 2021

- Know your herd's strengths and weaknesses. Refer to your ICBF Herd EBI Scorecard to help establish what these are.
- Select a team of high-EBI AI bulls that will improve your herd when breeding your dairy herd replacements. For a typical 100-cow dairy herd, a minimum of eight bulls should be used on your herd, with no more than 15% mating to any one bull – i.e. only 15 straws of each bull selected at a maximum.
- Target high-EBI females (typically maiden heifers, first and second calvers) to breed your next generation of dairy herd replacements. Lower EBI cows should be bred to beef AI from the start of the breeding season.
- Use the Dairy Beef Index (DBI) to select suitable beef AI sires for your dairy herd. A team of bulls should be

selected that suits the various dams in your herd (i.e maiden heifers, young cows and mature cows) and the number of these that are selected for beef AI. Bulls with higher beef merit figures should be selected for older animals. Consider the use of vasectomised bulls in conjunction with beef AI as an alternative to beef stock bulls. Avoid using dairy 'sweeper' bulls.

- Use the ICBF HerdPlus Sire Advice Tool to help manage your breeding programme and simplify the process of sire selection. It will allocate your bulls to cows based on their strengths and weaknesses, as well as manage inbreeding. Cows designated for beef AI should be flagged to ensure that only the best animals are used to breed dairy herd replacements. For more information on this tool, please speak to ICBF HerdPlus,

your Teagasc advisor and/or your AI company.

- If using sexed semen, only use high-EBI sires and ensure that all sexed semen inseminations occur early in the breeding season. Any inseminations with Jersey or crossbred bulls should be conducted using sexed semen only.
- Pay careful attention to straw handling and AI procedures, as sexed semen contain fewer sperm, and these sperm are more fragile after the sorting process.

The breeding guidelines have been developed by a DAFM-led dairy calf welfare working group, consisting of key industry stakeholders. Members of the working group include the following: DAFM, ICBF, Teagasc, national AI companies, IFA, ICMSA, ICOS, Dairy Industry Ireland, Meat Industry Ireland, Bord Bia and Animal Health Ireland.