

Extended Lactation: will genetic progress change?

The use of extended lactation (EL) within Victorian dairy farming systems is now considered commercially viable. With research information now available and farmer experience growing, an informed decision can be taken by farmers and advisors regarding use of EL.

Introduction

It is increasing difficult to maintain a seasonal calving pattern. The modern dairy cow is capable of lactations well beyond the traditional 300 days. This provides dairy farmers with new management options. EL is a system that suits the modern cow.

Will there be a change in genetic progress?

- There are both positives and negatives for rate of genetic progress
- Fewer heifer calves will be born in an extended lactation system
- Fewer heifer calves will be required as replacements in an extended lactation system
- More cows will have calves to AI
- More high genetic merit animals will have calves
- Extended lactation allows greater selection pressure

Cows calve less frequently in an extended lactation system. This will result in a slower introduction of improved genetics from an individual cow. However, there are a number of compensating factors that provide a benefit in genetic progress under extended lactation (EL).

EL allows more time between calving and mating. It is estimated that 100 days is now required between calving and mating to achieve optimum reproductive performance and this cannot be achieved for the majority of cows in a seasonal (300 day lactation) calving herd. As a result, in an EL system, more cows will be in calf overall and more will be in calf to first mating.

Given that the first round of cow matings are to AI, more heifer calves will be AI bred in an extended lactation system due to more cows being joined at an optimum period for reproductive performance. This provides a greater choice between heifers retained as breeders.

Higher producing cows are generally in negative energy balance when joined in a traditional calving system and the consequent reduction in pregnancy rates means fewer heifer calves are born to the highest producing cows. By contrast, more heifer AI calves can be expected from an extended lactation system, given cows are joined later when in positive energy balance.

A higher number of first calvers will be in calf due to heifers not being in negative energy balance at joining in an EL system. On average, the genetic merit of the heifers is highest, hence their calves will be of higher genetic merit and this will be another positive for rate of genetic gain under EL.

Higher selection pressure can be applied to an EL system as fewer cows are culled for empty, allowing greater culling for production and other desirable traits.

NOTE In-Calf and other principles of sound breeding management should be used in an extended lactation system

Further References:

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For further information contact:

Greg O'Brien, DPI Ellinbank, ph 03 56242288
Ash Michael, DPI Leongatha, ph 03 56629901
Hayden Ballinger, DPI Warrnambool, ph 03 55619926
Tom Farran, DPI Kyabram, ph 03 58520505



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