DAIRY EXTENSION CENTRE

Extended Lactation: how long will cows milk?

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 increasingly 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.

How long will cows milk?

- Modern cows are capable of lactations well beyond 10 months
- Lactation persistence varies considerably between cows
- Most cows will milk for 16 months (18 month calving interval)
- Heifers have higher persistence than cows (that is, they have a slower rate of decline and may even have higher daily yields than older cows when lactation lengths exceed 400 days)
- With lactations beyond 16 months, many cows will dry off early

The modern dairy cow is more persistent than cows of years gone by. But how long can we expect cows to milk?

There is considerable variation between cows. Naturally, the number of cows making it to the planned dry-off date depends on the daily milk yield cut-off. Milk in the extended lactation phase is high in fat and protein, so volume is not an accurate indicator of milk income.

The average effect on Friesian cows in Victorian research studies cows is shown in the following tables.

For a 0.35 kg MS/day (4 L/day) cut-off:

- All cows were able to milk for an extra 3 to 6 months
- More than half the cows milked for 22 month/670 day lactations did not make it to the target dry-off date, but most milked to within a month or two.

How many cows made it? 0.35kg MS/day (4L/day) cut-off

Planned months of lactation	% cows milking at planned dry-off
10 months	100
13 months	100
16 months	100
19 months	80
22 months	40*

* 80% were in milk at 21 months

At a higher daily milk production cut-off, there are significantly less cows making it to the dry-off date.

How many cows make it at 0.5 – 1.0kgMS/d cut-off?

Planned months of lactation	% cows milking at planned dry-off			% cows milking at 1 month from dry-off		
Cut off kg MS/d	0.5	0.75	1.0	0.5 kg	0.75 kg	1.0 kg
10 mths	96	92	92			
13 mths	92	88	88			
16 mths	100	75	58	100	83	79
19 mths	63	54	21	83	75	71
22 mths	46	25	25	79	42	42

There is little difference in persistence between 10 month and 13 month lactations. The number of cows making it to planned dry-off for lactations of 16 months or more depends on desired daily milk yield at cut off. All cows can still be producing 0.5 MS/day at the end of 16 month lactations and the majority can produce 0.75 kg MS/day. For 19 month lactations the number persisting to the planned dry-off decreases although the majority get to within 1 month of planned dry-off. Around 25 to 40% of 21 month lactation cows were persistent enough to reach the planned dry-off or within 1 month of planned dry-off. For the longer length lactations, either a longer dry-off should be expected or milk production in the final months should be expected to be 0.5 MS/day or less for a significant number of cows.

Heifers are more persistent than cows as they are able to produce as much milk in the extended lactation phase whilst cows produce less milk in the extended lactation phase than they do in the first 300 days.

Extended lactation performance over a 670 day lactation – heifers vs. cows

Measure	Heifers	Cows
Milk solids day 1-300, kg MS	390	505
Milk solids day 301-670, kg MS	404	385
Milk solids ratio (d301-670/d 1-300)	1.04	0.76

Without selection for Extended Lactation, cows can currently be expected to milk for 13 to 16 months (15 to 18 months between calvings). Calving intervals of 21 to 24 months will see a number of cows drying off before the intended dry-off date. These cows gain more condition in late lactation.

With selection, a much higher proportion of cows would be able to successfully reach dry-off targets.

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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