



# Extended Lactation: which cows are suited to EL?

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.

## Which cows are suited?

Although, modern dairy cows are able to milk well beyond 300 day, some cows are more persistent in their lactation than others.

Cows most suited to EL are:

- those with a higher proportion of northern hemisphere Holstein genetics
- those that lose more than a unit of body condition in early lactation
- those that gain less liveweight during a lactation
- those with the highest 300 day milk yields

Heifers are more suited than cows.

## Persistence of cows over a 670 day lactation

Studies in Australia and NZ, using 670 day lactations (equivalent to 24-month calving intervals), have found that the proportion of North American Holstein genes and lower liveweight gain over a lactation are both associated with lactational persistency. The best predictor for cows likely to have good EL's was daily yield at 300 days; the best predictors in early lactation were hormonally based and included lower blood glucose, lower IGF and lower insulin concentrations in plasma samples. Surprisingly, higher growth hormone was not as good a predictor as expected.

### *Factors affecting extended lactation performance*

- % milking at 670 day dry-off vs. % North American Holstein (% N-H) genes

Study	% N-H genes	% milking at dry-off
NZ	<12	15
Ellinbank 1 (Vic)	62	42
Ellinbank 2 (Vic)	64	54
NZ	>88	48

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

### *Extended lactation persistence*

- *heifers vs. cows*

Measure	Heifers	Cows
Milk solids days 1-300, kg	390	505
Milk solids days 301-670, kg	404	385
Milk solids ratio (d301-670/d1-300)	1.04	0.76

**Further References:**

Effects of Varying Lactation Length on Milk Production Capacity of Cows in Pasture-based Dairying Systems; M J Auldish, G O'Brien, D Cole, K L MacMillan and C Grainger, J of Dairy Sci, 2007: 90 : 3234-3241.

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