



Age at first calving in dairy cows: which months do you aim for to maximise productivity?

Mike Steele

Hello, and welcome to this Knowledge Summary; age at first calving in dairy cows, which months do you aim for to maximize productivity? My name's Mike Steele and I'm a dairy consultant and director of Inspire Cattle Solutions.vet.

The clinical bottom line was an optimum range of age at first calving or AFC on dairy farms appears to be 22 to 25 months inclusive. Lower or higher than this figure can bring lower first lactation 305 days in lifetime milk yields, lower fertility, and lower chances of surviving to a second lactation. Achieving an AFC of 22 to 25 months can bring the highest economic return to dairies. I looked at 17 papers, 15 case series, one review of case series and cohort studies of 125 articles and one randomized control trial summarizing over 2.4 million individually cow records.

In milk yield, cows calving between 20 to 25 months produce 2.1 to 2.4 kilos of milk per day with cows calving at lower than 21 months, they yielded 600 kilos less in the first lactation and over 26 months, 800 kilos, less. With fertility, it's more difficult because most of the papers measured calving interval and days open, which is not representative of the whole AFC group from the year studied.

However, one paper reported that lower AFC, between 22 to 25 months, achieves better first service conception rates. With longevity, one paper suggested that cows calving between 20 to 26 months are more likely to survive to calf a second time. This may not be a reflection of AFC, but rather better management of transition and early lactation as a whole. And profitability on modelling was found that AFC between 22 to 25 months was more profitable by \$98 to \$138 per heifer than other AFCs. So AFC is a key performance figure in heifer management, including diet quality, availability, disease risk, insemination techniques, and pre-wean growth and knowledge of this evidence can help goals in fertility and milk income. So, hitting these targets gives both foundation and drive improvement projects throughout the industry.

So, thank you for listening to this Audio Summary.

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