

Maintaining a tight calving pattern without routine inductions

CASE STUDY 02 TONY CLARKE, WHITEWATER DAIRY – EDITH CREEK, TASMANIA

Tony is a part owner and manager of Whitewater Dairy at Edith Creek, north-western Tasmania. Although he lives two and a half hours away from the farm, he is closely involved with its operation, visiting at least once per week. The owners of Whitewater Dairy purchased the farm in 2011. It is milking 1000 cows on a milking platform of 310 hectares and the farm has now reached 'steady-state'. Tony is not looking to increase cow numbers. He has a crossbreed herd and is a moderate level grain feeder. 60 per cent of Whitewater Dairy can be irrigated and 500 megalitres of reliable water is available.

Given that Whitewater Dairy is not increasing its herd size, the required number of replacement heifers have been achieved in recent calving seasons from a single cycle of artificial insemination. Herd bulls then have been used for another two rounds to mop up the empty cows. Tony works on rearing 200 to 250 replacement heifers each year (that is, a 20–25 per cent replacement rate). Tony recently decided to stop using calving induction and last year was the first time that no cows were induced. Until then, Whitewater Dairy induced approximately 80 out of 1000 cows each year.

Table 1 Farm Description

Operating arrangement	Absentee owner
Business Phase	Steady state
Effective milking area	310 hectares
Cow numbers	1,000
Breed	Cross breed
Concentrates fed	1.5 tonne/head/year
Production	430 kg milk solids/head/year
Years without induction	1 year
Joining length	9 weeks
Empty rate	14%

Calving

Whitewater Dairy is a wet farm that grows pasture deep into the season. Tony believes that carrying cows through winter will significantly damage pasture and negatively impact the stocking rate. The farm is ideally suited to a single seasonal calving pattern.

Why calving inductions are no longer used

Tony's decision to stop inducing cows was prompted by the industry phase-out of the practice. Following on from the industry's policy, Tony wanted to take a proactive stance.

Figure 1 Early pregnancy testing at Whitewater Dairy allows reproductive data to be analysed.



Why calving inductions are no longer used

It has been relatively easy for Whitewater Dairy to adapt to stopping the practice of calving induction. They have maintained good discipline prior to this change of practice by keeping the joining length limited to 9–10 weeks. Given the inherent fertility associated with a crossbred herd and tight calving pattern, the gains provided by further manipulation of the calving pattern using calving induction should be easily compensated for by other measures which Tony and his team have put in place.

Dry cows are fed a grain concentrate for two to four weeks before calving. This is done so that when the cows calve, their appetite has been maintained as much as possible, and so the rumen papillae are well developed consequently absorbing as many nutrients as possible in early lactation. Body condition loss is therefore reduced in early lactation resulting in cows that cycle sooner after calving and achieve higher conception rates. It is routine for Tony's team to examine all cows before mating start date to ensure that their reproductive tract has cleaned post calving. Any cows that appear to have an infection within their reproductive tract are treated appropriately. Without treatment, most cows with an infected reproductive tract will eventually clear the infection but the time taken to get pregnant will be delayed.

When choosing semen to use, Tony is guided by the advice given by his AI technician. Tony confesses not to be very focused on genetics and largely chooses semen based on price. However, two traits that Tony does request that his sires are selected for are 'ease of calving' and 'short gestation'. Pregnancies from these sires should therefore result in more days between calving and mating start date allowing more time for the reproductive tract to repair and recover, improving the likelihood of the animal getting back into calf, as well as inciting less damage to the dam's reproductive tract.

What effect has stopping the use of calving induction had on farm performance?

The empty rate from a nine week joining on Whitewater Dairy has usually been around 10 per cent. The last joining period, which coincided with stopping calving induction, resulted in an increased empty rate of 14 per cent from a nine week joining. However, Tony is not convinced that this has got anything to do with stopping calving induction. Excellent herd records have allowed Tony to identify that the majority of the extra empty cows were in the first lactation age group. Since maiden heifers have never been induced to calve on Whitewater dairy, Tony continues to be satisfied with their decision to stop inducing cattle. He is comfortable that stopping calving inductions will not negatively impact farm finances.

Future plans

Tony has identified that their first lactation animals are over-represented as having poorer fertility. In the past, Whitewater Dairy has milked their first calvers 'once-a-day' after calving until the joining period has finished. Tony believes that this has resulted in pleasing results and he thinks that they will return to this practice for first calvers and any lighter condition cows.

From Edith Creek, the truck ride for bobby calves is a 3 hour journey. Tony is trying to limit the amount of bobby calves that they generate by using a combination of sexed and beef semen. Whitewater Dairy does not rear their beef calves, and, although trading beef calves is a bit more work, Tony thinks that it is a worthwhile enterprise due to their value. For the upcoming joining Tony will synchronise the herd with two injections of prostaglandin. He will then use dairy semen for one week to generate replacement heifers. On younger, more fertile cows, he plans to use sexed semen. For the two rounds of returns he will inseminate cows with Hereford semen. In between the times of peak returns, he will use beef herd bulls.

Financially, we don't think stopping calving inductions will make much of a difference

Why the system works

A strength of Whitewater Dairy is its ability to grow good quality pasture deep into the season. This is cheap feed. However, the farm is also sensitive to damage by cows during winter and consequently is ideally suited to a single seasonal calving pattern. Having a tight calving pattern maximises the amount of green feed each cow directly harvests during her lactation and increases her chance of becoming pregnant in the following lactation. The tight calving pattern has been achieved partly due to the inherently fertile crossbred cattle, good rumen adaptation prior to calving, short gestation sires and good reproductive health at joining time.