

## 5 Tips for a successful Dry Period

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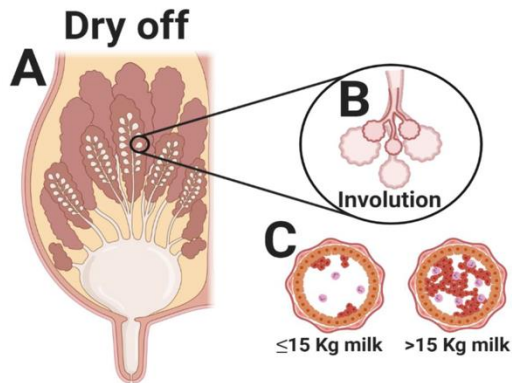
The dry period is essential for dairy cows, to allow for regeneration of milk secreting tissue and prepare the udder for optimal success in the next lactation. This period can also be very stressful on the animal due to social, physiological, and nutritional changes making it increasingly important to pay close attention during this time. Ensuring cows are effectively dried off to reduce intramammary infections and discomfort, combined with proper nutrition and general management is essential for cow health and productivity in the following lactation. This article will highlight five tips to promote a healthy, successful dry period!

### **1. Gradually reduce milking frequency (~1/d) in the week leading up to dry off**

A common but controversial topic within the dairy industry is how to properly dry off cows. Abrupt dry off is still commonly used, where cows are milked normally (2/3x per day) up until the day of dry off. Whereas gradual dry off reduces milking frequency to ~1/d to reduce milk yield leading up to dry off. While some literature is conflicting as to which method is better, overall gradual reduction is deemed more efficient at reducing milk yield, accelerating mammary involution, and reducing intramammary pressure. Research from the University of Helsinki in 2020 has also demonstrated many positive impacts of gradual cessation of milking including reduced stress and discomfort and improved cow welfare, post dry off.

### **2. Aim to reduce milk yield to 15 kg or less by the time of dry off**

Research from the University of Guelph and Ohio State University have shown that milk yield at the time of dry off is the most important factor correlated with intramammary infection/mastitis. Cows with higher milk yields at dry off (>15 kg/d) experienced a greater degree of milk leakage, intramammary infections, and a higher incidence of mastitis in future lactations. Researchers from the University of British Columbia have also investigated the impact of skipping a milking the day before dry off and they have found promising results in regards to further decreasing milk yield before dry off. Another strategy to limit milk production prior to dry off is to introduce a lower energy diet. Combined, these efforts will help cows achieve a target threshold of 15kg or less by dry off.



• Adapted from Pascottini et al., 2020  
Intramammary pressure

### 3. Be thorough, consistent, and patient with (or without) dry cow therapy

If using dry cow therapy, ensure each teat is thoroughly cleaned with disinfectant, antibiotics are administered correctly, and teats are properly sealed. While it may seem taxing on your daily tasks, these small acts are crucial for mammary health and productivity in her next lactation. As concerns with antibiotic usage continue to increase, researchers have been thoroughly investigating blanket vs select dry cow therapy. When considering an approach to drying cows off, make sure to consult your veterinarian. Select dry cow therapy has proven to be effective in some circumstances, but it is not a 'one

size fits all' approach. Researchers are still developing mathematical models to identify good candidates for this approach and while there is great potential, careful consideration should be used when making these decisions in your herd. Keep in mind that each mastitis case costs Canadian dairy farmers ~660\$/cow/year. Being proactive and making the decision that best fits your management and your cows, will always pay off in the end!

### 4. Feed the appropriate diet

How to feed dry cows has become a hot topic in the last decade with several researchers and industry professionals promoting controlled energy dry cow diets, or more commonly referred to as the "Goldilocks diet". These diets incorporate high quantities of low nutrient dense forages (such as wheat straw) in attempt to reduce the dietary energy density and limit body condition gain. When managed correctly, these diets have been proven effective for promoting metabolic health post-calving. Pay close attention to straw particle size in the diet as recent research from the University of Guelph (2019 & 2020) has shown positive impacts of feeding straw with a 1-inch chop length vs a 4-inch chop length. Further research from the University of Guelph also proved that providing Promix Dry Cow (a molasses bases dry cow product from Liquid Feeds Inc.) will prepare the rumen for the fresh cow diet. These benefits include improved intake in the week leading up to calving, reduced sorting, and lower BHB levels 3-weeks after calving. Additionally, pay attention to mineral levels in the close-up diet. Anionic supplements or a calcium binder are commonly added in the dry cow diet to help control the risk of milk fever.

### 5. Limit stressors

The dry period is a stressful time for cows as there are several changes and challenges that they will face within a short period of time. While some of these stressors (dietary changes and pen changes) are inevitable, there are others that we can control and limit through good management. Avoid introducing new animals to the pen as much as you can. Each time new

animals enter a pen, antagonistic interactions increase while eating and resting time decrease – all of which are particularly detrimental in the weeks leading up to calving. Additionally, stocking density in the dry period should be under 100% to ensure that all cows have access to lying and feeding space (recommended 30 inches/cow). Keep in mind that space requirements will naturally increase as cows progress through their pregnancy, so try to ensure sufficient stall width (or at least 100 square feet of bedded pack space/cow) in the pre-fresh pen. Lastly, recent research out of the University of Florida has highlighted the importance of providing heat abatement in the dry period – not only for the dam, but also for the calf. Cooling cows during the dry period can increase mammary growth thereby resulting in better production throughout her lactation, improved immune status, and promote dry matter intake throughout the dry period.