



# Could you earn more money with Cows that live longer?

A guide to cow longevity

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**Cow longevity is an essential ingredient for successful dairy farming.**

However, with so much differing opinion on the value and importance of cow longevity we have created a short guide to longevity.

In this guide we will dispel some of the myths about longevity, answer some of the big questions about cow comfort and introduce the best method of identifying ways to prolong the productive life of cows.

# 10 things you should know to get **MORE**

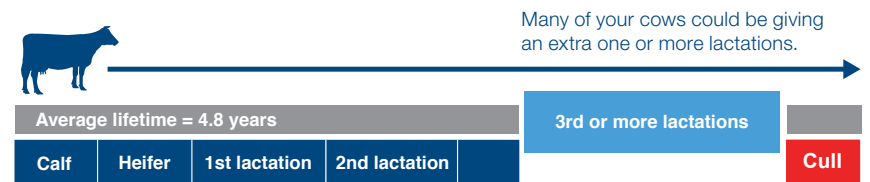
## #1

### Cow longevity is not only about prolonging a cow's life.

Longevity is about discovering the very best way to make sure that more of your cows are more productive for more lactations.

This means focusing on many aspects of dairy farming and animal welfare to increase the total lifetime productivity of your best cows through better routines, conditions and decisions.

### Productive lifetime yield can be increased by gaining one or more lactations



2.5

Today's average productive lifetime for a dairy cow is 2.5 lactations. Would 3.5 lactations be possible on your farm?





# #2

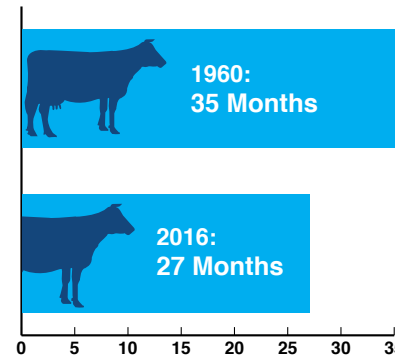
## Cow comfort is important to cow performance and longevity.

A cow has to circulate around 20,000 litres of blood through her udder in order to produce 40 litres of milk. That's pretty much the equivalent of a human running a marathon every day.

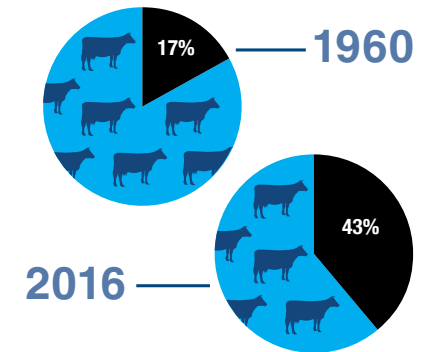
To help cows perform at their best throughout their lives, and be productive for longer, the conditions have to be ideal for cows. This means barn design that provides access to clean water, feedstuff, grooming and fresh air while ensuring there are clean, comfortable and correctly designed resting areas and walkways.



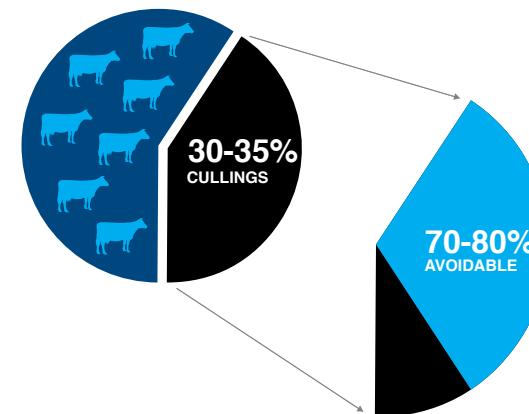
The productive period of a cow has dropped - but it cannot go much lower.



The annual cull rate has increased.



In most herds 30-35% of the cows in the herd are replaced every year



7 out of 10 cullings are involuntary and can be avoided.

Main reasons for involuntary cullings:

Mastitis

Lameness

Fertility problems

# #3

## What is the ideal number of lactations per cow?

An incredible amount of research has been carried out on the ideal number of lactations per cow, with differing results. The fact of the matter is that there isn't an ideal number of lactations – there are so many variables to dairy farming that it simply isn't the same amount for every cow on every farm. In fact, in many countries the average number of lactations per cow is falling due to the increasing performance demands put on cows. Good cow comfort can help reverse this trend with helping to avoid injuries and let cows optimally make use of their time.

## Involuntary culling of cows early in lactation is extremely costly for dairy farmers

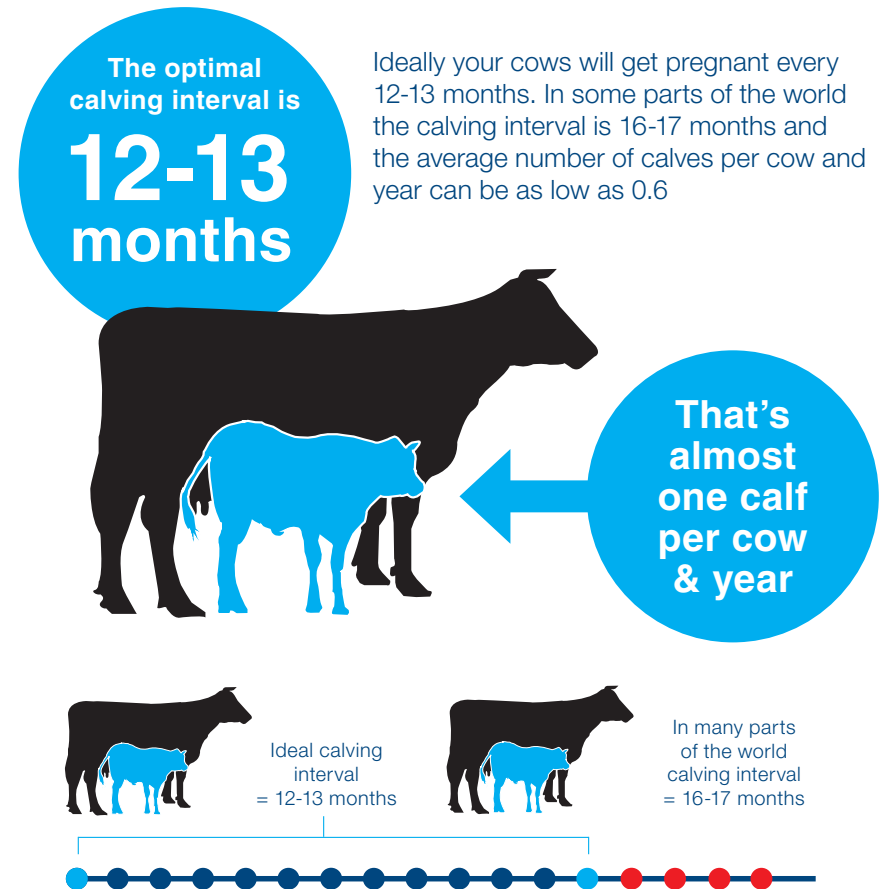


# #4

## Most dairy farms will benefit from one extra lactation per cow.

To keep productive cows in the herd they must become pregnant. Studies show that many cows are anoestrus, or have “silent heats”. These cows are often culled and recorded as having fertility problems.

However, cows do not leave the herd because they have “fertility problems”, they leave because we have failed to manage reproduction properly. Successful reproduction is dependent on inseminating the right cows at the right time. To do that we sometimes need tools to help us make those decisions and keep the right cows in focus or even help support health treatments when we have identified a problem.



For every day calving interval is extended farmers will lose money (on average 3 Euros per cow per day).



# #5

## Would one less cow in a barn result in more milk per day from a herd?

If cows have adequate space when resting and a comfortable and hygienic spot to lie on, they will respond more positively to the barn environment and each other.

Stalling should provide room for a cow to lie down, stand up and rest. If obstructions are in the way, or the cubicle is too small, cows' health will deteriorate and they may suffer from lameness.

Damp, unhygienic resting areas can lead to teat and hoof health issues. Cow mattresses combined with enough proper bedding material on top are the most hygienic and labour efficient solution. They replicate the feeling of a pasture for a cow, while protecting her knees from injury.

If bedding is not used and cows lie down on concrete floors, bacteria can thrive in cracks and in the floors, which is a health hazard. Uncomfortable, hard floors also mean cows will not get the rest they require, which will impact rumination, and their knees and hocks will not be protected.

One hour resting time translates into 0.91 to 1.59kg more milk per cow daily.

Failure in cubicle comfort reduce lying time with 2.5 hours (20%)



# #6

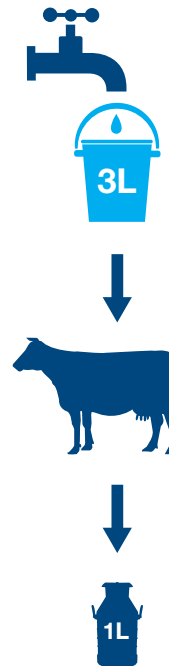
## Would one extra calf per cow cover the cost of new water bowls throughout the barn?

The healthiest and most productive cows on a farm have good access to larger amounts of clean and fresh water. If they don't, both health and productivity can suffer.

On average a cow needs to drink at least three litres of fresh water for every litre of milk produced.

**High performing cows consume 150 litres of water a day. To cater for cows there should be a drinking bowl per every ten animals and two or more easily accessible troughs per group.**

Fresh water is essential for high quality milk and is a large contributor to preserving cow health. A good rule of thumb is that if you don't want to drink the water in a barn, neither will the cows. With an effective water supply system and easy-to-clean troughs and bowls this won't be an issue.



# #7

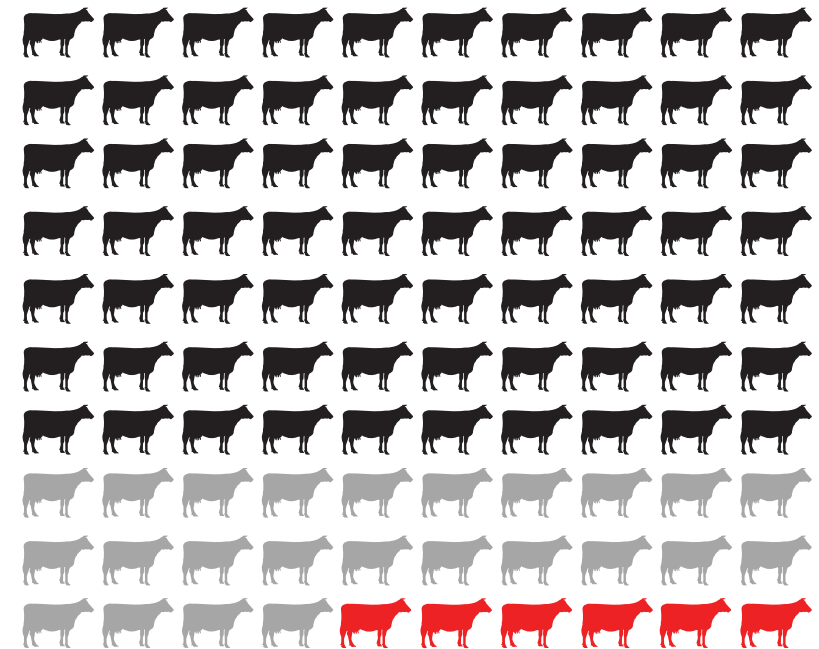
## Is a lame cow really a productive cow?

Cows should be able to walk as naturally as possible when indoors. With the right amount of space and the right flooring they will take long confident strides and hold their heads up straight.

This can be difficult on concrete floors as they are typically wet, slippery, dirty, hard and rough. This in turn puts unnecessary stress on hooves, which is a major contributing factor to lameness. **Lame cows can still be productive, but the question is for how long – lameness is also connected to poor reproduction and is one of the main reasons for culling cows. To help combat this non-slip rubber flooring should be used.**

Rubber flooring is sturdy, non-slip and comfortable to walk on, and it's easy to keep clean. These factors improve barn hygiene, which helps keep hooves healthy and reduces stress on cow's joints.

## Lameness is not always easily detected



30 out of 100 cows are lame but only 6 on average are detected.



# #8

## Would one extra lactation per cow cover the cost of improving feeding areas?

Feed is one of the most important and costly aspects of dairy farming. As well as paying for roughage and nutrients, many farmers use the services of nutritionists to get the ideal mix for their cows.

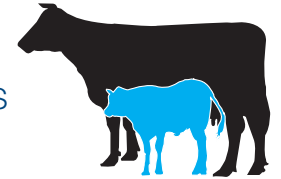
No matter how well farmers carry out their feeding plans, if the cows can't access feed effectively or if the feeding areas aren't kept clean, cows won't get the full benefit from all the feed. **Making sure there is enough space in feeding areas for all cows will ensure some cows won't over eat – wasting precious feed – while others go hungry.**

As high producing cows eat as often as 12 times a day, they need to be comfortable when doing so. Head locks, feeding stalls and the right amount of feed bunk space can make all the difference when it comes to effective feeding. A smooth feed coverage surface also ensures feed is in the best condition, while making cleaning, and thus feed hygiene, much easier to manage.

## Optimised feed intake after calving

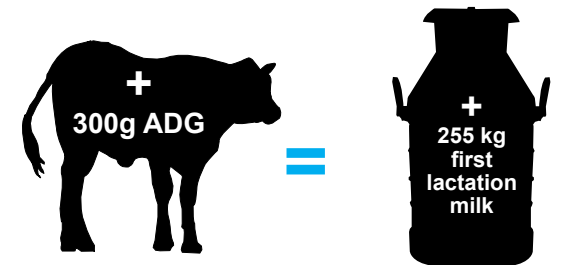
### OPTIMAL FEED INTAKE IS ONLY POSSIBLE IF:

- Cows are not too fat at calving (What's the BCS of YOUR cows at calving?)
- Cows are fed high quality and tasty rations
- Cows are in optimal health (don't forget hooves and legs)
- Stress is avoided around the moment of calving (avoid changing of groups)
- Rations are not changed near calving
- There is enough feed and enough room to eat for every cow



Feeding large amounts of high quality colostrum to the newborn calf boosts health and post-weaning feed consumption thereby significantly affecting the calf's productivity as an adult. Ideally calves should get 10% of their body weight within the first 6 hours of birth, starting within 2 hours after birth.

**For every 300gram of ADG (average daily gain) pre-weaning, first lactation milk production is increased by at least 255 kg first lactation milk**



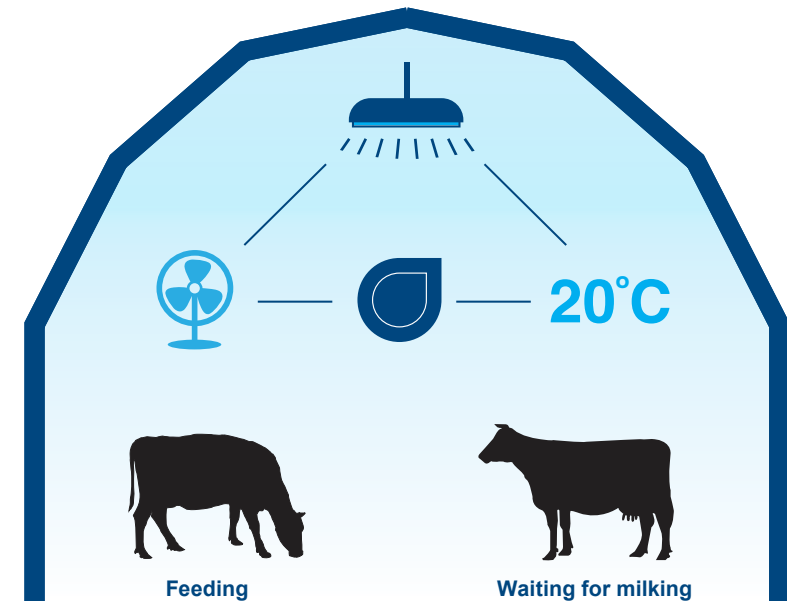
# #9

## Do cobwebs in a barn contribute to the culling rate?

Cows like cool temperatures and fresh air, which isn't surprising considering the amount of work they have to do to produce milk. What is surprising, is that at 20°C in humid conditions cows start suffering from heat stress and using energy to cool themselves rather than produce milk, which is bad for productivity.

If there is poor air circulation in a barn, cows can become unhealthy and milk quality suffers. **A well ventilated barn – whether it's done with fans, vents or curtains – is essential for productivity and cow well-being.** If a barn is full of cobwebs, smells strongly of ammonia and has a lot of condensation, ventilation is inadequate.

The light in a barn also affects cow productivity. In barns with poor natural light, milk production is often lower than in well lit barns. With the right kind of illumination, lactating cows will be encouraged to produce more milk. This should be done with cow lighting, which is dimensioned in accordance with the size of the barn.



It is essential to control temperature, moisture levels, manure gases, pathogens and dust concentrations through proper ventilation and cooling to provide cows with the constant fresh, clean air they need to achieve their production potential. This is particularly important at feeding, and while they are waiting for milking.

# #10 Is the cost of culling a cow higher or lower than a swinging cow brush?

The general behaviour of cows in a barn can lead to productivity losses and health issues. Putting things in place to correct cow behaviour can make a big difference to a farm.

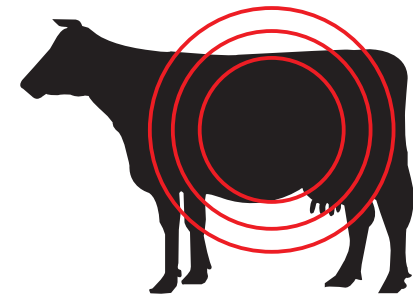
**Swinging cow brushes stop cows from scratching on sharp objects in the barn and promotes increased milk production and better health by stimulating blood circulation.**

A research project at Cornell University found that using a DeLaval swinging cow brush could cut mastitis levels and increase milk production by up to one kg per cow a day.

A cow brush in the right place in the barn can also help the flow of cow traffic by guiding cows through the barn. It can also be used to decrease competition between cows around water troughs and feeding areas.

## Optimised heat detection

On average around half of the heats can be observed manually. Advanced milk analysis tools can detect heat with an accuracy of up to 95% and inform you when to perform optimal insemination.



# How can DeLaval help you gain more milk from more of your cows, for more lactations?

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At DeLaval everything we do is about helping dairy farmers to meet the challenge of sustainable milk production. Producing top quality milk from healthy cows in working environments that are safe, positive places to be for people and cows is why we exist, and what we have been focussed on for more than 135 years.

That is why everything we do, everything we plan and everything we build has at its core the principles of cow longevity.

We would like to briefly show you a few of the key systems and products that are exclusive DeLaval technologies and innovations that we think might help you meet the challenges that you face every day, some of the products and solutions that we believe will help most dairy farms produce more milk, from more cows, for more lactations.



## It all starts with DelPro

We believe that DeLaval DelPro™ is the farm management platform that should be at the heart of any longevity program. DelPro™ is not just one piece of farm management software, it is a full suite of applications, sensors, BioModels and interfaces that allow you to make better decisions relating to the management of each and every cow, and each and every interaction on your farm. Reproduction, mastitis control, feed planning, analysis



of milk yield and productivity – DelPro™ is the key to turning all the data you collect into actionable, quality information to help you make decisions that will lead to increased longevity on your farm.

## Milking Systems

Everything we do at DeLaval is about better milking. That's why at the heart of all of our milking systems – whether wholly or partially robotic, or entirely manual- is a deep understanding of how milking works. This means understanding the way milkers operate, the way milk is best extracted, transported and stored to ensure its quality – and above all, a deep understanding of cow behaviour

and biology. You will see this experience and eye for detail in everything from how we design our systems to work with the cow's natural movements to improve throughput, to advanced vacuum and pulsation settings for fast, gentle milking. Every step of the milking process working to create a productive, safe, gentle, calm place for workers and cows.

## Cow comfort line

**Our exclusive assortment of cow comfort solutions are available to provide your cows with a comfortable, healthy and productive life. A few of the solutions that, like DelPro™ and our milking systems are exclusively available from DeLaval, are shown here.**

### Cow mats and mattresses

DeLaval mats and mattresses are designed to absorb this impact and promote natural activity and rest leading to better health and productivity outcomes.

### Cow ventilation

An effective ventilation system should help to reduce heat stress, increase yield, and clear the air in your barn. As every barn is different, DeLaval offers a range of purpose built dairy fans in different sizes, blade configurations and power levels to suit different barn layouts.

### Cow brushes

Take a moment to watch a cow manoeuvring herself under or alongside a patented DeLaval cow brush, trying to ensure the bristles scratch and massage every itchy or dirty spot – bliss. A well-positioned cow brush stimulates healthy blood circulation and promotes cow welfare.





## Milk-Ready at all times

To make sure that every time a cow enters a DeLaval milking system, that system is ready to make the process as comfortable, hygienic and productive as possible, it is essential to have the system ready to perform at its best. This means the mechanical systems are properly serviced, the right consumables are in place, all the milking settings are optimised with all the detergents and teat dips fresh and ready for the seasonal or environmental conditions. Only DeLaval can offer InService™ All-Inclusive which will ensure that all of this happens automatically for one agreed price.

## Let us help you put it all together.

As well as the expertise to help you design and implement a whole farm approach to cow longevity, we have a global team of advisors who are there to help you stay on track with your operational targets, helping you to adjust and optimise your farm's performance.

Our goal is to harness our experts and technical knowledge to put you at the centre of a dairy farm that improves your herd's longevity to deliver a better work environment and more milk. To help you create a whole-farm system that works seamlessly to deliver for you.

After all, longevity may centre on cows, but making it happen is all about you.



**More Productive  
More Lactations  
More Often**

[www.delaval.com](http://www.delaval.com)

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