

# Presenting the Perfect Cow

by Denis Aitken

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**T**here is no such thing as the perfect cow, but we all want a cow that is perfect for our conditions.

My role as a Traits Other than Production (TOP) Inspector has led me onto many farms and into many herds both in New Zealand and overseas.

The main objective for most of us is to make a profit and one of the leading factors in making a profit is to lower your costs and one of the most logical ways of doing this is to increase the herd life of your cows.



*Close to the ideal cow.*

To do this, your cows must have the functional traits that will enhance their lifetime - traits that will not break down under the stress of production, walking long distances, getting in-calf, calving and being able to turn large quantities of grass into milk.

I will endeavour to convey my conception of the ideal cow, in physiological terms, for NZ conditions; what to look for when purchasing a cow/herd to help eliminate some problems from the start, and help make culling decisions.

Generally most operations work on a 25% replacement rate but I wonder if they have ever looked at the financial consequence of a lower replacement rate?

To have a lower replacement rate the cows must last longer and to do this they must have good functional traits as well as being satisfactory producers.

If you rear the same number of replacements, that leaves animals for sale, export etc.

**T**he features of a cow that lead to a longer lifetime in the herd, her functional traits, include:

**Capacity** starts right at the front with good width of muzzle. The width of muzzle and strength of jaw can tell you a lot of things about a cow; the width of chest and depth of body displays the ability of the cow to process grass, and their general health - narrowness through the chest and lack of depth in the body indicates a general weakness in the whole animal. Statistics taken from TOP results have several times confirmed a high correlation between the capacity score and a cow's production. In other words, the more capacious cows, in general, produce more.



*An example of good capacity and rump angle in a cow.*

**Rump Angle** is the trait I believe needs the most improvement in New Zealand across all breeds. While levelness from the hip to the pin is acceptable it is important that we endeavour to have a slope from hip to the pin in our younger animals. It is a fact that all animals in the wild have a prominent slope in the rump. This is evolution and necessary for survival.

Of course, the obvious reasons are the ease of calving and cleaning after calving, therefore improving the chance of getting back in-calf. This is an area that I am endeavouring to put more emphasis on at the moment.

**Rump Width** is, of course, related to pelvic area and it is important that the cow has a good rump width in relation to her overall size. Although, I believe that to have high pins and a wide rump is no better than having good rump slope and a narrow rump width.

**Legs and Feet** without getting too technical, I want to show you that the setting of the thurl joint between the hips and pins can have a major bearing on the angle of the legs and therefore the locomotion of the cow. While we all see some cows with extreme curvature often leading to long and curled toes with little depth of heel, it is important that we do not go to the other extreme with straight or posty legs that can result in jarring as the feet are placed on the ground.

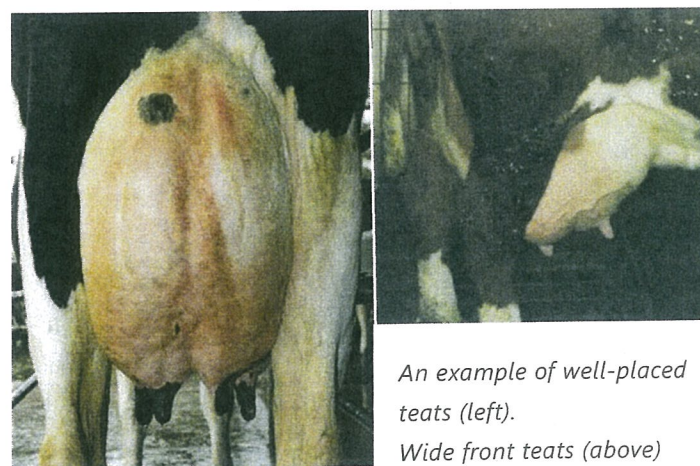
**Udder** is the part that most of us see the most of and have to deal with most often. Udder support or the suspensory ligament the strength of which mostly determines the udder height.



Weak ligament (left) and strong ligament (right).

The stronger this ligament the longer the udder life but remember the strong ligament with poor rear teat placement can lead to one of our more frustrating problems at the moment - close rear teats.

Many of the close rear teat problems arise from the teats being on the inside of the quarter and as more milk is made the outside of the quarter rolls around and the teats touch or cross.



An example of well-placed teats (left).  
Wide front teats (above)

The fore udder should be snugly attached to the body of the cow to minimise movement and to reduce the chance of it dropping.

On any cow the attachment of the fore udder is more snug on the left side than the right due to the abomasum being on the left giving greater area for attaching.

The rear udder is scored on both width and height with a high wide rear udder being the most ideal for longevity. Front teats are ideally placed in the from the edge of the udder and hanging perpendicular. Teat size has now become a major problem both here and overseas. It is the trait that the majority of farmers are most concerned about.

Over recent years there has been a steady decline in the level of stockmanship on our dairy farms. We have some of the best grass growers and pasture managers in the world but many struggle with the basic skills in animal husbandry.



An example of long toes (left) and undershot jaw (right).

I have come across people who will tell you a cow is lame but not sure what foot is the problem or have one cow that is light in condition tell you that she has been like that all her life without recognising she has an undershot jaw.

No matter how much is discussed about body condition scoring it is still a contentious issue and the cause of many disputes.

If the industry wants to keep the 1-10 level as standard then people should be using it.

How often do you see animals quoted in fractions for example: 4.75 or 3.9 when you never hear of a 2, 7 or 8 quoted. Let's use the scale and only break it down in 0.5 units.

When purchasing cows always make sure you see them on short pasture or in the yard so that foot problems are evident.

It is not a silly idea to observe them being milked so that many of the management problems that I have discussed can be identified.



# Measuring for the Perfect Cow

*Using a simple piece of string and measuring the length of a Holstein Friesian cow's head you can determine if she is the ideal cow.*

**The length** of the head will be two times from the top of her head to the chine (shoulder)

The length between her hip bones

The length across the outside of her pin bones

The length from her hip to her pin bones

The length from her hock to her dew claw

The total length of her udder

**Halved** it is the distance between her eyes

The width of her rear udder

The ideal width between the front legs

**Quartered** it is the length of the eye socket

The width of the hock

The width of the muzzle

**An eighth** is the ideal length of the front teats.

That is the length of a man's thumb to the top of the second joint.

**Remember that each extra lactation you get from a cow contributes heavily to the bottom line.**



Denis demonstrates how to use string to measure for the ideal cow.

**Visit Denis Aitken at the 2016 NZ National Agricultural Fieldays at the TechniPharm site # J17 to see his Perfect Cow demonstration.**