



## Heifer Growth & Dry Matter Intake

The last two months we have addressed silage quality issues and their impact on summer milk production. This month I want to look at heifer growth and dry matter intake for both growing heifers and lactating cows. Firstly, let's look at heifer growth.

It is important to realize that calving age is highly correlated to the profitability of the animal, and that body weight after calving (580 kgs for Holsteins) is highly correlated to first lactation milk production. Frequently I stress to farmers that dry off BCS is the first limitation to a cow's next lactation. Simply, less than optimal calving BCS - no lactation momentum, and reduced feed efficiency during lactation. The same applies to first calf heifers with a multiplier effect of social injustice within the herd due to lack of size and body weight to be competitive. Excessive energy will be directed to growth during first lactation robbing you of milk profit. Too often heifers are culled for poor performance, assumed to be of genetic origin, or poor reproductive performance, both of which can be directly attributed to inadequate nutrition and growth rates prior to first calving.

The key objective of a heifer-raising program is to achieve a relatively constant rate of growth. Holstein heifers should reach 350 to 360 kgs and 1.2 meters at 13 to 15 months of age. Back in June I wrote on calf rearing with emphasis on avoiding weaning stress, as this is the first stumbling block to achieving constant growth rate. Poor transition from milk to total dry diet can set back calves for many months, delaying joining and risking stunted development and culling of a genetically superior animal.

Assuming this is not the case, the next risk period is their first summer. At present they should be thriving, many still being fed grain in addition to perfect pasture. Sound nutrition and good growth rates go hand in hand. By Christmas pasture quality will have declined severely, and if not supplemented heifer growth rates will also decline severely. There is a strong correlation between weight and height. This has been a standard guide for many years in deciding candidates for joining based on height.

Generally forages conserved in southern Australian dairying areas are not adequate to sustain good growth rates over summer. Pasture hay is commonly too high in fibre to allow adequate intake and supply of sufficient energy and particularly protein to achieve our goal joining weight. Quality silage can meet energy requirement through adequate intakes, however often will not provide enough protein to sustain desirable growth rates particularly uninoculated silage with its inherent protein losses during extended fermentation.

Excessive energy results in fat deposition and is detrimental to life time production. Protein is the driver in growth of heifers as it is in milk production in lactating cows.

Supplementing heifers with a soundly formulated grain mix will ensure, assuming forage is not restrictive, aggressive growth rates and a highly profitable replacement heifer upon which your future rests. Look for a heifer meal that meets the following criteria. Energy – minimum 12.5 MJME/kg. Crude protein – minimum 17.5%. NDF (fibre) 21%. Choose a meal which reaches these criteria from natural grain sources, avoiding added fats as an energy source, or protein derived from urea products. Trace and macro elements and supplemental vitamins are necessary. Ionophores and buffers (Rumensin & Tylan) will provide significant economic benefits in growth rates and rumen health.

Finally, a reminder on dry matter intake for both milkers and young stock. Pasture is declining in both feed value and most importantly, quantity. This decline, particularly quantity can be very subtle. Both milkers and young stock can be several kilograms of dry matter underfed by Christmas with severely detrimental affects. Too often we assume declines in the vat are par for the course. Too often they are well in excess of the goal of 1 litre per month decline from peak milk. These substantial declines, not just in milk, but to a far greater extent, in profit, can frequently be directly related to a decline in dry matter intake simply through dairymen not matching declining pasture quantities with supplemental feeding. We often are several weeks behind pasture growth rate decline. Test your cows daily from now on by offering silage to meet this dry matter shortfall. Observe residue after feeding to ascertain is the residue a result of excessive feeding or is it unpalatable fractions of the feed fed out.

Apply these same criteria to your heifer feeding and you are well on the way to fully fed and productive dairy cattle, the essence of profitable dairy farming.