



The Middle Child Syndrome

Young calves by their natural dependence, appeal to our parental instincts and emotions, drawing our attention to their nutritional needs. Milking cows by their importance to our life style by virtue of their production capacity also attract our attention to their nutritional needs. Replacement heifers all too often fall into the category of 'The Middle Child Syndrome'.

I acknowledge the inspiration of my son Matthew (middle child) for this article, or so he would have me believe.

Growing heifers achieve their potential for growth comfortably while pasture availability is not a restriction. The problem of restricted growth occurs as soon as pasture growth declines. Unless feeding is supplemented, growth and development of a sound, productive, 2 year old springing heifer is limited.

A Holstein heifer has a potential live weight at 24 months (and springing) of 580 – 600 kgs. Regularly heifers calve at 24 months at a live weight of around 450 kgs. First lactation production is limited by both the heifer's nutrient demand for growth, but her capacity to consume feed is also affected due to the correlation of feed intake to live weight, and her capacity to compete in a mature herd.

I believe there are three periods of restricted growth. The first I dealt with in June this year in my article on calf rearing. The necessity for a calf to be capable of digesting forages prior to weaning. A calf needs to be eating 1.5 to 2 kgs of grain before she can be weaned. Grain establishes the correct percentages of volatile fatty acids to promote rumen development enabling digestion of pasture or hay. This is the same principle as lead feeding a milking cow to prepare her rumen for a lactation ration. A calf needs a good transition program from being milk fed to digestion of forages. Failure to establish a mature rumen prior to weaning will effectively, partially starve the growing calf until this situation has self corrected, possibly several months of poor to zero growth.

The second and third periods of high risk to growth rates are the two summers between birth and first calving. I am convinced from observation that we lose between 100 and 150 kgs of live weight gain over these two summers through inadequate nutrition.

Home grown pasture hay simply does not contain enough energy and protein to support 800-1000gms/day growth rates, essential to achieve a target calving weight of 580-600 kgs.

Fibre levels (NDF) are also restrictive to intake. Silage can supply adequate nutrition, with the exception of uninoculated silage due to its inherently low digestible protein. Usually the milking herd takes priority for silage consumption.

Certainly hay must be offered to growing stock adlib over summer to ensure fully fed heifers, however a suitable grain mix is, in my opinion, the only real answer to optimise heifer growth rates and production potential after first calving.

I encourage all my clients to feed grain from soon after the birth of their heifers through to lead feeding as springers. The only variation is in the amount, depending on pasture availability; 1 kg/day while adequate pasture is available, then 2 kgs/day over the summer hay-feeding period.

My preference, when I speak of feeding grain, is a grain mix. As young calves starting on grain I recommend a grain mix that is easily digested (a blend of several grains) plus additives. Once the calf is weaned and digesting forage well, we usually change to feeding the grain mix fed to the milkers for cost reasons. Having said that I need to specify what kind of mix we feed to milkers.

A milking cow grain mix contains, with some seasonal variations, wheat, corn, canola meal, a trace element premix, lime, salt, MagOx and Rumensin/Tylan. Assuming a feeding rate of 5 kgs/cow/day to milkers, a 1 kg to 2 kg/day feeding rate of this milker mix to growing stock will reduce the additives to an appropriate level. There is an abundance of trial data to support the use and benefits of Rumensin/Tylan in growing out young stock. Optimum feed utilization, and the control of rumen pH. Management of rumen pH plays a major role in feed conversion efficiency in milkers and growing stock. A milking cow, to achieve optimum production, needs supplementation of trace and macro elements. A growing heifer has a similar demand for supplementation to meet target growth rates of 800gms to 1 kg live weight gain a day.

Many first calf heifers suffer lameness within weeks of calving. Again, I am convinced acidosis from spring pasture 9-12 months prior to calving produces poor quality soul material, predisposing heifers to damage of the soul layer from gravel laneways and puncture from pebbles on concrete yards. The use of Rumensin/Tylan in a heifer grain mix will substantially reduce acidosis from spring pasture, and consequently reduce lameness soon after calving due to strong healthy hooves.

The most critical period is a heifer's first summer. If she fails to continue a steady growth rate, she requires an accelerated growth rate later to catch up. Obviously, steady growth is desirable, and preferred to spurts. Under normal grazing style heifer raising, as opposed to feedlot style, it is difficult to have sufficient additional nutrient density in pasture to support a catch up growth spurt. All too frequently the set back in the first summer becomes permanent, creating further difficulties with joining on time to achieve a 24 month of age first calving, or at best, an under sized first calf heifer who struggles to be productive in a herd of far larger mature cows.