

RUMEN CALM™

Production and Fertility

Rumen Calm is a patented combination of dried yeast culture and a natural plant extract that reduces milk urea nitrogen (MUN) by minimising excess ammonia accumulation in the rumen. We have receiving very positive feed-back on fertility outcomes from Rumen Calm users. Strong heat activity, high submission rates, and significantly reduced return-to-service numbers. Farms that I work with on a monthly basis have noticeably higher Milk Protein percentages, and of course, dramatically changed manure to very structured pats and a major reduction in loose manure from high rumen ammonia/MUN .

WHOLE OF LACTATION BENEFITS

At the time we released Rumen Calm on the Australian dairy market there was an instant attraction to the fertility aspect. However, many of the implications of Rumen Calm reducing MUN (Milk Urea Nitrogen) have milk production benefits too. In our trial work, an untreated herd (control herd) recorded high MUN readings right through summer, despite very little pasture. The contributors were; summer crops (turnips etc.) and non-protein nitrogen (NPN) from silage. Silage has higher NPN than the pasture it was made from due to protein degradation during fermentation. The poorer the fermentation the higher the NPN; and of course, the lower true protein in silage against the pasture it was made from.

FERTILITY

The fertility gains are derived from several impacts created by Rumen Calm. 2) Energy saved from dramatically reduced rumen ammonia. 2) Lowered BUN (Blood Urea Nitrogen) improving uterine pH to more conducive levels for conception and holding of pregnancy. The reduction in conception rates from MUN readings of 19, is 38%. (Elrod, Butler et al, JAS 1993). Trial work in SW Vic certainly confirmed this.

THE ENERGY EQUATION

These typical summer/autumn MUN readings of 22 mg/dl were not much lower than late winter readings of 24 mg/dl to 26 mg/dl. Bear in mind, a reading of 12 mg/dl is considered neutral – no energy cost. Mike Hutjens, Professor Emeritus, Dairy Science, University of Illinois USA, is quoted as stating an MUN reading of 20 has an energy cost in disposing of surplus rumen ammonia equivalent to 3 litres of milk! As above, we've seen higher MP%'s and litres from Rumen Calm inclusion in grain mixes. Starch in manure decreased 25% with Rumen Calm.

THE PROTEIN DELEMNA

We go from extreme crude protein (total nitrogen content of feeds – mostly rumen degradable protein) highs in autumn/winter/spring grazing, to very low ration crude protein in summer, to the extent of energy being utilized to synthesise protein by rumen bacteria simply to meet the cow's need for protein. The end result is energy lost to milk production, inadequate protein for milk production and especially that protein deficiency's impact on dry matter intake - appetite. No wonder milk production plummets post-Christmas just as milk price starts rising!

Rumen Calm, in a 20 kg DM feed intake, can increase microbial protein equivalent to 0.5 kgs of high quality protein supplement (e.g., canola meal) per day. Rumen Calm's basic ingredients both contribute to colonisation and maintenance of a homeostatic rumen bacteria population optimising feed utilization, gut health, immune function and overall animal performance.

FIBRE DIGESTION

The yeast content of Rumen Calm nourishes rumen bacteria increasing beneficial populations. The natural plant extract in Rumen Calm further enhances the rumen microbial environment, both contributing to increased fibre digestion/feed conversion efficiency. Trial work showed a 8% reduction in undigested fibre in manure, and milk responses related to DM intakes.

THE ENVIRONMENT

The natural plant extract in Rumen Calm is not broken down in the rumen. It passes out via manure and continues working on microbes present in the fermentation biomass of waste systems. Undigested nutrient in effluent dams is utilised by conversion to plant available nutrient, and the formation of noxious gases is minimised. Further, ammonia smell so common in dairies during milking is virtually eliminated; an OH&S issue. Both are positive environmental outcomes which soon will be a regulatory matter on dairy farms.

SUMMARY

Rumen Calm has whole of lactation benefits to energy utilization for milk production, not just costly rumen ammonia mitigation; improved feed conversion to milk dollars through healthier gut environment and increased beneficial rumen microflora populations, especially lactic acid utilizing bacteria reducing acidosis cost to feed conversion and cow health.

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