



DIAMOND V Yeast Metabolites

We at Feedworks are proud to be able to supply you with the Diamond V Yeast Metabolites range. Since we undertook the distribution rights to the product in October last year we have both seen and received some very positive feedback from a large number of you.

First and foremost the greatest amount of comments stem from the reduction in price to a very affordable 6.4cents/cow/day, which we feel makes the product a mainstream alternative to the antibiotic rumen modifier market. This price reduction has provided many of you with the justification to use the product, and many for the first time. For this we thank you!

The feedback from the field has been very positive. This article aims to shed some light on the mode of action of increasing dry matter intake and production when the yeast metabolites are included into the herds ration.

Work by Mike Hutjens and Jim Drackley at the University of Illinois suggest that the effects of feeding Diamond V Yeast Metabolites on the rumen are varied and include;

- Increasing pH
- Increased rate and extent of fibre digestion
- Altered VFA profile
- Increase in the cellulolytic bacteria
- Increased rate of passage leading to improved dry matter intake

What are DiamondV Yeast Metabolites?

Diamond V yeast metabolites are a unique inactive fermentation culture, sanctioned by the AVPMA under the following classification.....

“An Inactivated fermentation byproduct that does not contain viable fermentation organisms. When added to Ruminant animal feed as a feed ingredient it represents a source of nutrients to help maintain natural ruminant microbial activity, which allows ruminant animals to consume and digest more dry feed”

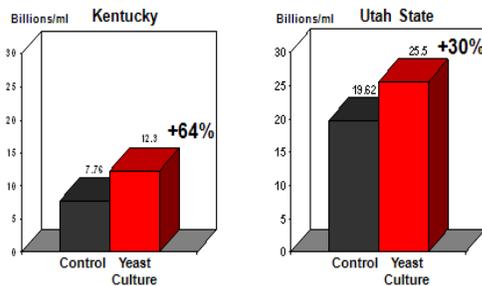
NB: Diamond V is NOT A LIVE YEAST and its positive impact is NOT based on live yeast activity and viability, which research has shown is compromised by temperature and extended periods of transport, storage and shelf life at normal room temperature or above.

Let's examine the key points within the above classification, as it forms the simple yet solid basis of the strong outcomes produced by Diamond V across a huge range of ruminant production systems right around the world...for nearly 70 years!

Maintaining natural microbial activity:

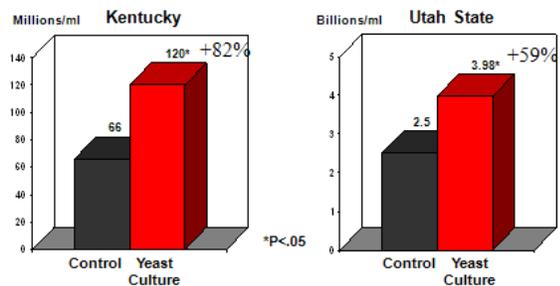
The microbial action within the rumen is the basic driver of all successful ruminant animal production. Without these microbes, the conversion of fibrous materials and forages into meat and milk becomes impossible. Many nutritional shortfalls can reduce the animal's natural potential for microbial growth in the rumen. Diamond V contains a broad range of standard and also unique micro nutrients (metabolites) that allow a ruminant animal to more closely approach its natural potential for a flourishing and more resilient microbial population in the face of changing nutritional environments. This is especially so in the case of fibre digesting microbes that are crucial in forage digestion, but are often the first microbes to respond negatively to diet shortfalls.

Impact on Total Rumen Microbes



Harrison et al. 1988. J. Dairy Sci. 71:2967-2975.
Wiedmeier et al. 1987. J. Dairy Sci. 70:2063-2068.

Impact on Fiber Digesting Rumen Microbes



Harrison et al. 1988. J. Dairy Sci. 71:2967-2975.
Wiedmeier et al. 1987. J. Dairy Sci. 70:2063-2068.

DAIRY

Impact on lactate Utilizing

◆ Yeast culture increases the number of lactate-utilizing bacteria

24 Hour Turbidity

Strain	Control	1% XP Filtrate	6% XP Filtrate
HD4 (<i>S. ruminantium</i>)	0.20	0.23	0.36
H18 (<i>S. ruminantium</i>)	0.10	0.14	0.17
B159 (<i>M. elsdenii</i>)	0.10	0.28	0.42
T81 (<i>M. elsdenii</i>)	0.03	0.10	0.30

*P < 0.05

Callaway and Jedin. 1997. J. Dairy Sci. 80:2039-2044

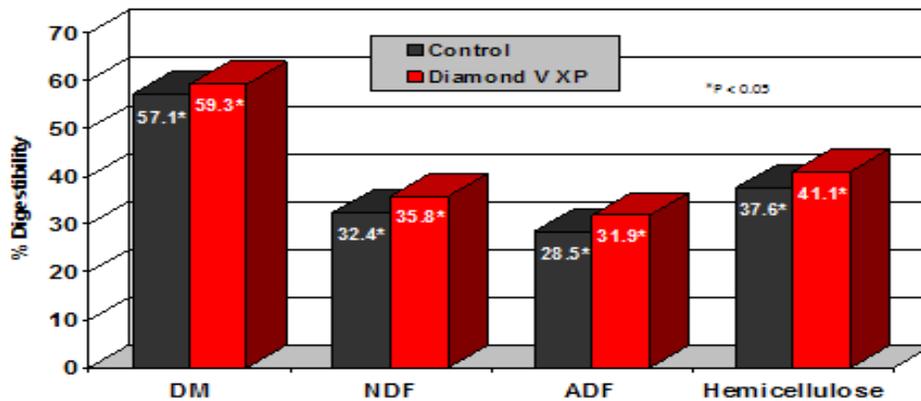
Diamond V

By delivering a broad source of nutrients, Diamond V allows the microbial population to more closely approach its natural potential. One of the classes of microbial bacteria that have been shown to grow in numbers is the lactate utilizing bacteria.

Impacts on Dry matter digestibility:

One of the natural outcomes of a rumen microbial population that more closely approaches its natural potential is that dry matter consumed is more effectively digested. The positive responses to Diamond V in microbial growth have in fact been shown to produce the anticipated improvements in digestibility of consumed dry matter. Improved digestibility delivers more nutrients from each mouth full of intake, and a more efficient Feed conversion of diet in a production system.

- **Diamond V improves the in vitro digestibility of forages across both grass and legume samples**

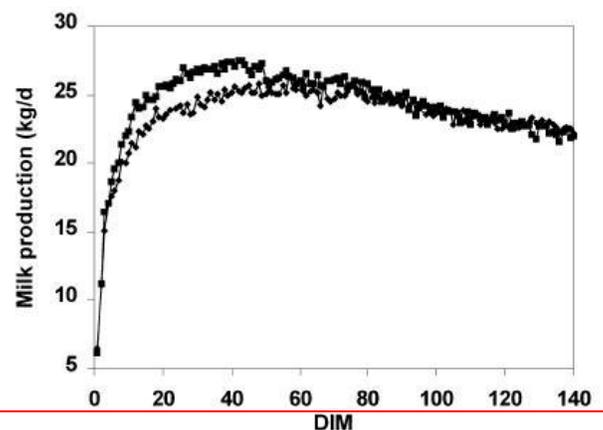


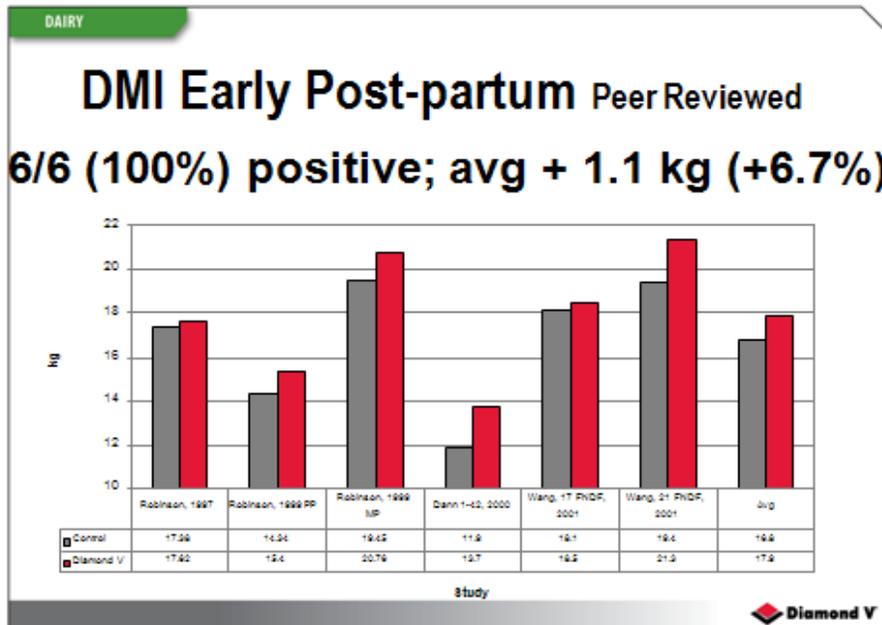
Yoon and Garrett. 1998. *World Anim. Prod.* Vol 1:322-323.

Animals are able to consume more Dry matter intake:

The unique make-up of the yeast metabolites is the key to how Diamond V promotes dry matter intake. The metabolites stimulate the microbial mass by providing the population with soluble growth factors such as a number of organic acids and various amino acids.

Trial work conducted by Jim Drackley and Mike Hutjens at the University of Illinois showed that Jersey cows that were supplemented during the transition period responded to Diamond V by significantly increasing dry matter intake in early lactation. The increases in DMI lead to the cows reaching peak milk not only faster but also higher than the control groups. Interestingly the cows also lost less body weight and used less energy for milk production during early lactation. (Drackley *et al* 2000 *J Dairy Sci* 83:123–127)

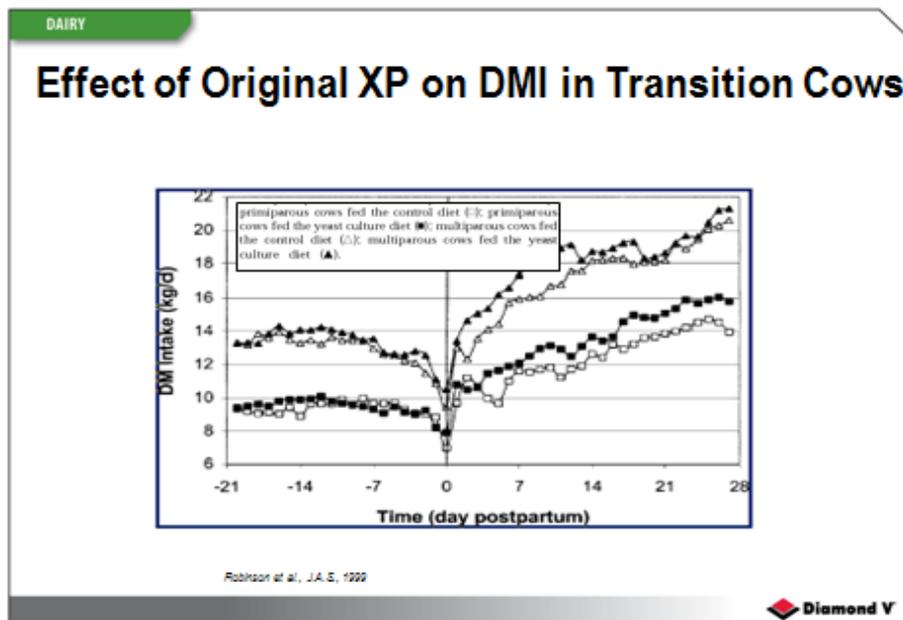




The typical outcome of a microbial population achieving natural flourishing levels and resulting feed improvements in feed digestibility is most commonly reflected in the animal's ability to consume more dry matter feed intake.

The recognition of the importance of dry matter feed intake is a crucial factor in the thinking of good nutritionists around the globe... "they can't do it on air" is a common comment (meaning that nutrient intake is the core driver of productivity, and this in turn must be consumed to be available).

This factor can be especially crucial around calving when promotion of dry matter feed intake is important at a time when it is often seen to fall way (with poor consequences for the cow).



We feel that the underlying basis for the use of Diamond V yeast fermentation metabolites is very sound indeed. We also know that conceptually sound science alone is rarely enough to convince discerning clients to support a product. Happily, Diamond V ticks the boxes in the other areas as well !

70 years of History Brings confidence

Diamond V has been in production for 70 years. The company and its products have a reputation that can only be earned through success over such a long period of time. We are aware of no other product of this type that can point to such a long period of “proving”. What this means is confidence that the product will deliver for you just as it has done for so many others over the last 70 years.

Independent and objective Research brings confidence

Through the long history of Diamond V, the company has undertaken the ongoing objective research that underpins the Diamond v products. Many eminent USA Universities have carried out this independent work on the product. As a result, the outcomes of the use of Diamond V are captured in an independent history of peer reviewed published papers. We are not aware of any other product of this nature that can point to such a long heritage of published papers. What this objective research means to you is confidence that the Diamond V will deliver benefits that have been independently supported.

Reference points bring confidence

Around 50% of the milking cows in the USA consume Diamond V during lactation. There are literally thousands of alternatives available to the USA market, and that market is no less discerning than our own local market...yet the proven, cost effective and reliable nature of Diamond V continues to deliver for dairymen in the North America, and all around the world where Diamond V is fed to literally millions of cattle across a wide range of conditions and production systems. What this means for you is confidence that Diamond V will deliver its benefits in the real commercial world, and in the context of your production system.

Sharp pricing brings commercial confidence

Many new products with big claims come with equally substantial pricing. Many new niche products range from 15-25c/cow/day. At such pricing, the commercial risk of a modest or poor response is great. With Diamond V, a sharp pricing structure based around “home USA” pricing plus extra transport means a price to our market that offsets a great deal of risk. When you consider the sound basis of the products use, what this means to you is that you can have commercial confidence in the product

Trust

The term trust is often used, but when you consider all of the previous points, it’s obvious that the Diamond V products have long earned the right to that word. Tens of thousands of consumers of this product across the globe in many species can testify to the benefits that Diamond V can bring

If you are seeking a product with the attributes noted here, and at a price far more cost effective than many alternatives with less history and less supporting data, then contact us for more information

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