

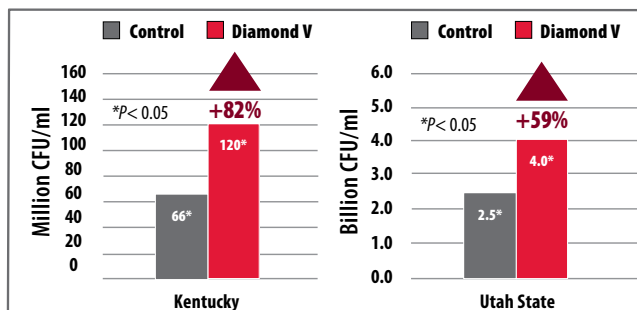
Better Lactation Efficiency

Mode of Action Research

1. INCREASES THE NUMBER OF IMPORTANT RUMEN BACTERIA

Stimulates Rumen Bacteria

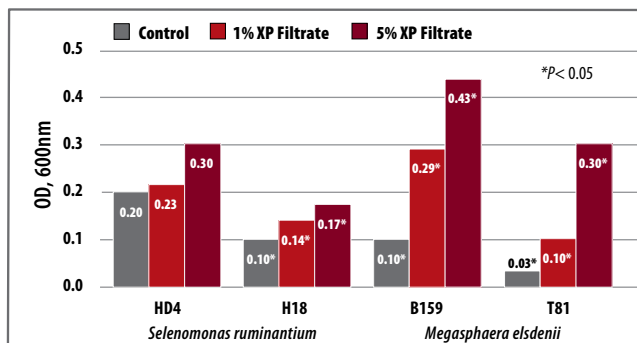
- Diamond V Original products increase the number of fiber-digesting rumen bacteria.



Harrison et al. 1988. *J. Dairy Sci.* 71:2967-2975.

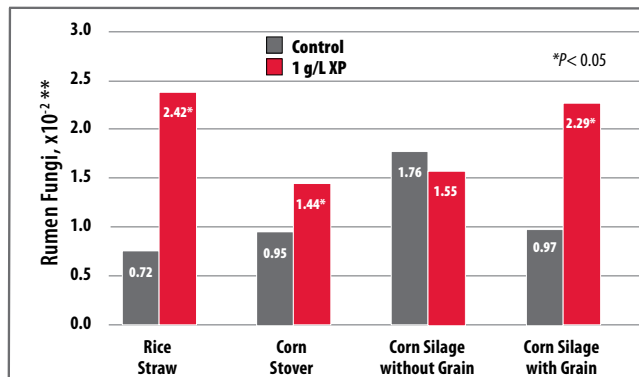
Wiedmeier et al. 1987. *J. Dairy Sci.* 70:2063-2068.

- Diamond V Original products increase the number of lactate-utilizing bacteria.



Callaway and Martin. 1997. *J. Dairy Sci.* 80:2035-2044.

Stimulates Rumen Fungi



Mao et al., 2013. (In press)

** Percentage of total microbes.



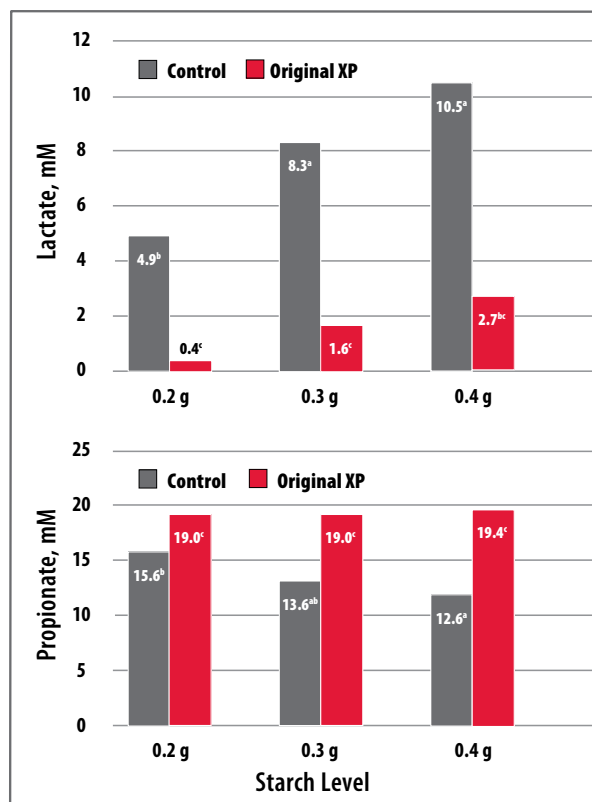
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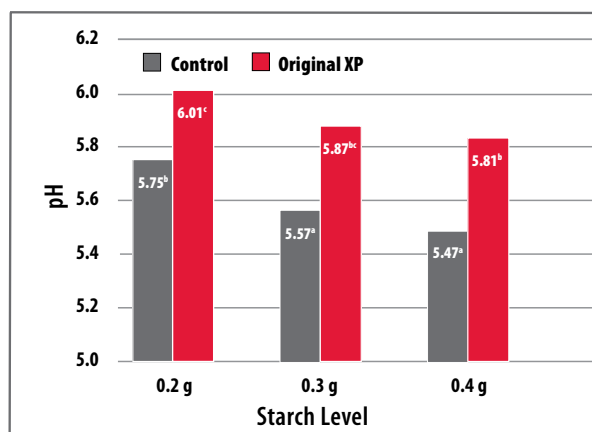
2. STABILIZE THE RUMEN ENVIRONMENT

Rumen Challenge

- Under high starch feeding condition
 - Diamond V Original products decrease lactate accumulation
 - Diamond V Original products increase propionate production



- Under high concentrate feeding condition Diamond V Original products can maintain higher ruminal pH

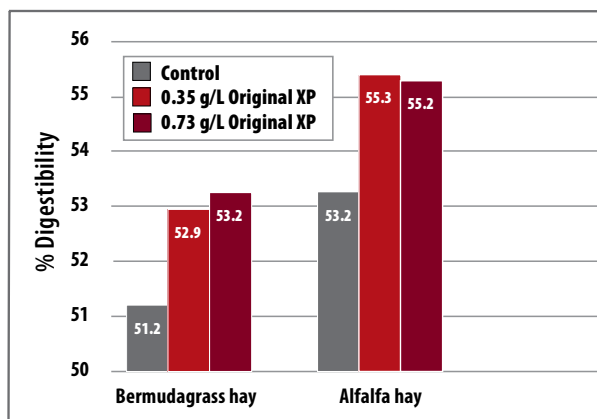


3. IMPROVE RUMINAL AND TOTAL TRACT DIGESTION

Ruminal Forage Digestibility

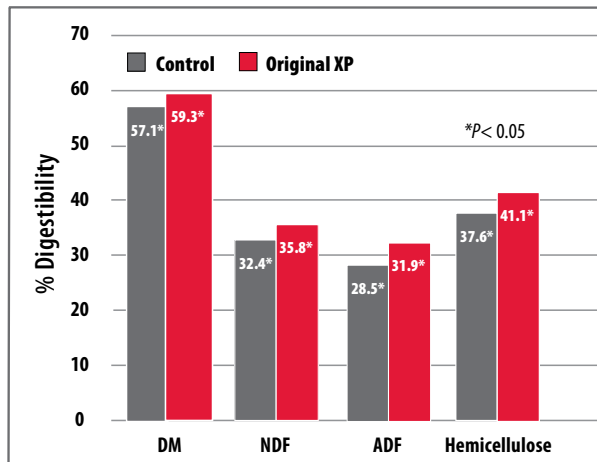
- Diamond V Original products improve ruminal forage digestibility

Digestibility of Hay



Sullivan and Martin. 1999. *J. Dairy Sci.* 82:2011-2016.

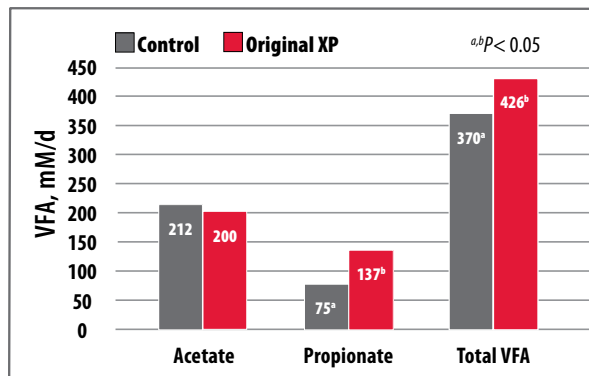
Digestibility of Corn Silage



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

4. INCREASES ENERGY AND PROTEIN AVAILABILITY

Increase Energy (VFA) Supply



Miller-Webster et al. 2002. *J. Dairy Sci.* 85:2009-2014.

Increase Protein Supply

Reference ¹	MN ² (g/d)	Improvement (%)
Hristov et al. Control	333 ^a	9.3
Original XP	364 ^b	
Allen & Ying Control	362	3.6
Original XP	375	

¹ Hristov et al. 2010. *J. Dairy Sci.* 93:682-692; Allen and Ying, 2012. *J. Dairy Sci.* 95:6591-6605

² Microbial nitrogen

^{a,b} Significant (P < 0.1)

**SCIENCE IS KNOWLEDGE IN THE FORM OF PREDICTABLE RESULTS.
DIAMOND V PUTS THAT KNOWLEDGE INTO EVERY BAG OF PRODUCT.**

If you would like more information on this study, please contact your local Diamond V representative.

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