

DAIRY



New Claim
for Diamond V

July 2, 2013



Diamond V FDA Functional Claim

- ◆ **Helps support dry matter intake (DMI) of dairy cows when fed as part of a total mixed ration during the first 70 days of lactation**



Scientific Validation

CHANGE IN DMI AND MILK YIELD*

Stage of Lactation	Difference in DMI			Difference in Milk Yield		
	lb/ head/ day	P-value	95% CI	lb/ head/ day	P-value	95% CI
First 70 days of lactation	1.37	0.003	0.46 to 2.24	3.02	0.001	1.21 to 3.98
Mid-late lactation	-1.72	0.008	-2.99 to -0.46	2.16	0.049	0.02 to 4.29

* Meta-analysis, Poppy et al., 2012

What Does This Validate?

- ◆ The confidence in your decision
- ◆ The Research
- ◆ Your decision for success
- ◆ Your move on to other critical management decisions
- ◆ Your profitable decision



What Are Functional Claims?

- ◆ Functional claims relate the effect of a nutrient, ingredient, or a feed to the body's function.
- ◆ FDA's position is that functional claims for feeds must be based on the component's taste, aroma or nutritive value (reference: CVM Guide 1240.3605).
- ◆ For example: "Diamond V Original Product supports dry matter intake"

Who Reviews Functional Claims?

- ◆ FDA Center for Veterinary Medicine is responsible for reviewing and enforcing
- ◆ Products that carry a functional claim are not intended to diagnose, treat, cure, or prevent any disease. This would be considered a drug claim!

Only Diamond V has a FDA Functional Claim for Dry Matter INTAKE!

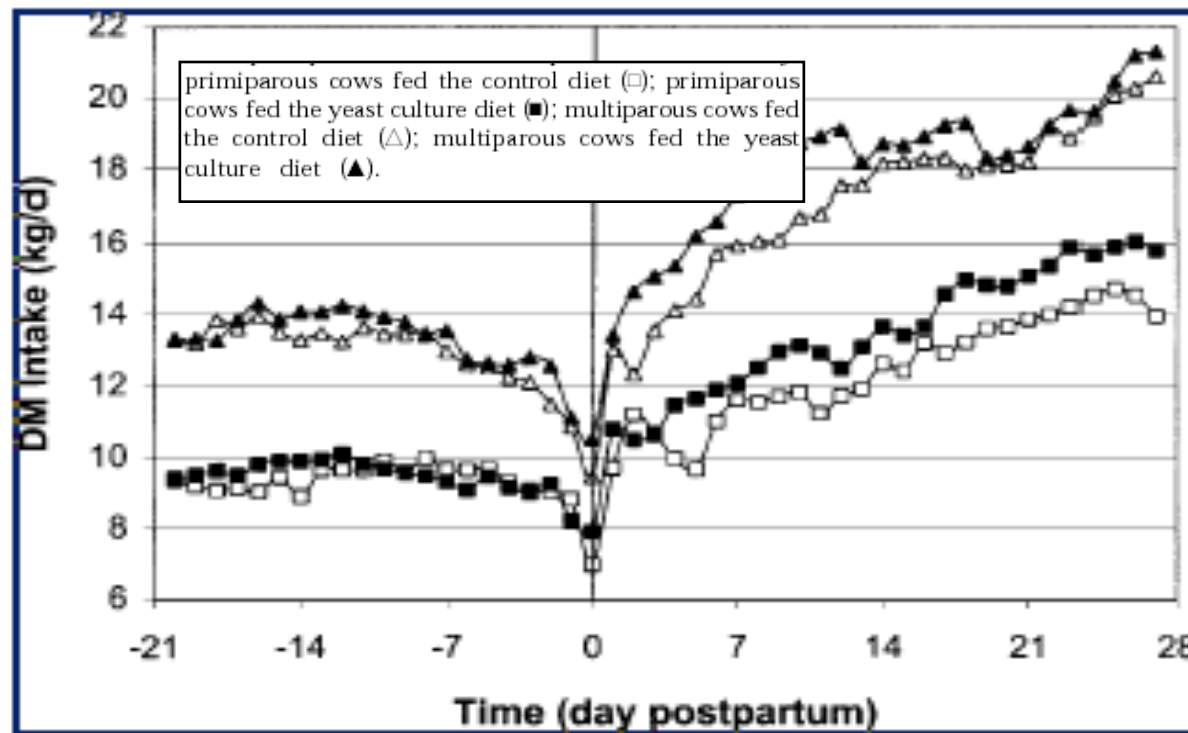
- ◆ Diamond V is the only company, within its category of the feed industry, that holds a functional claim for DMI.
- ◆ **CLAIM** - *Supports DMI first 70-days of lactation*

What Does More DMI Mean in Early-Lactation?

- ◆ Less weight loss
- ◆ Healthier cows
- ◆ Better reproduction
- ◆ More Milk
- ◆ Improved IOFC

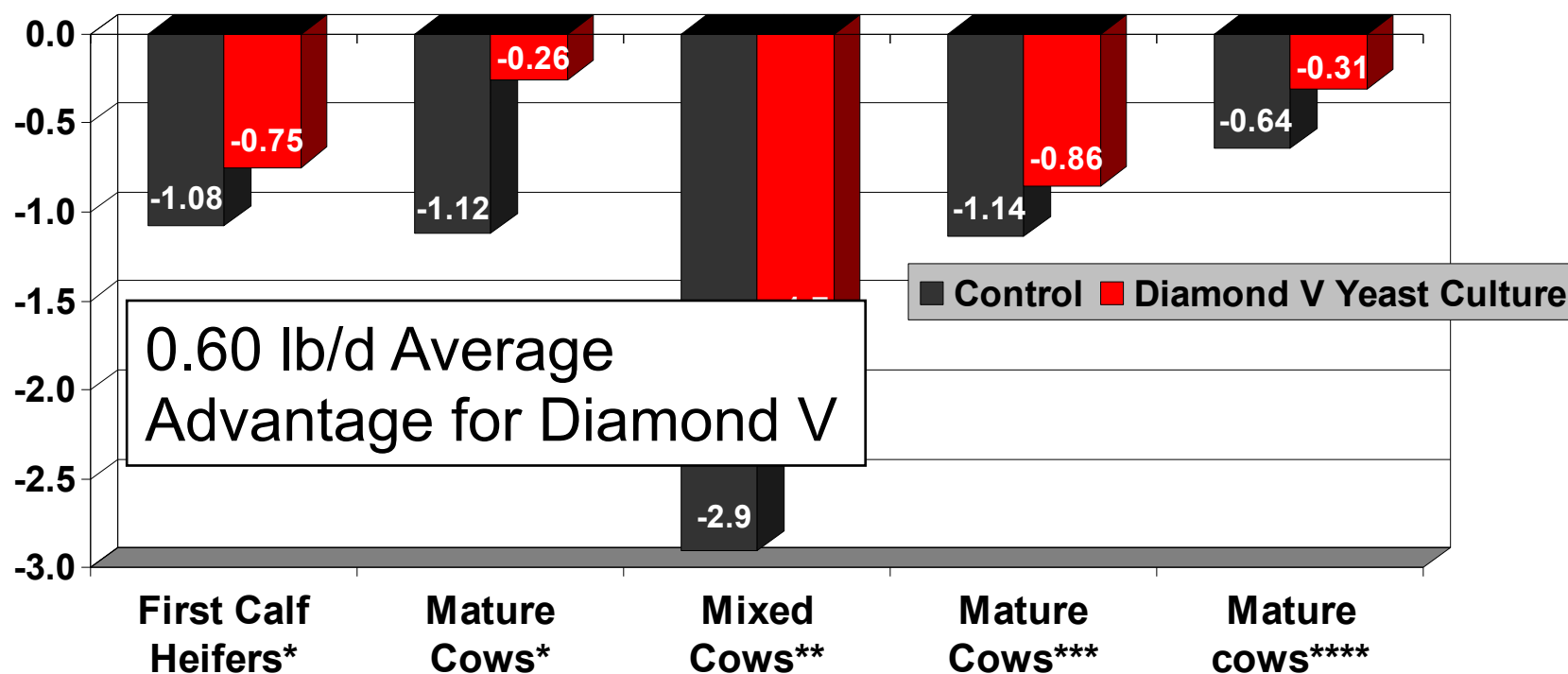


Effect of Original XP on DMI in Transition Cows



Robinson et al., J.A.S., 1999

Reduced Weight Loss (lb/d) During Early Lactation



*Robinson and Garrett. 1999. JAS. 77:988-999

** Dann et al., 2000. JDS. 83:123-127.

*** Erasmus et al., 2005.

****Robinson. 1997. JDS. 80:1119-1125

Dry Matter Intake and Energy Balance

- ◆ DMI is strongly correlated with milk yield and energy balance during transition and early lactation period of the dairy cow.
-(Santos et al., 2009; Grummer et al., 2010; Allen, 2000)
- ◆ Energy intake is inversely correlated to cows' negative energy balance.
-(Villa-Godoy et al., 1988) DMI ($r=0.73$) milk yield ($r=-.25$)
- ◆ Energy balance is tightly linked with reproductive performance¹, health² and immunity³
-(1. Butler and Smith, 1989; 2. Reist et al., 2002; 3. LeBlanc, 2010).

Metabolic Events Affected by DMI



Health Benefits

- ◆ incidence of milk fever, retained placenta, metritis, ruminal acidosis, displaced abomasum, and mastitis during the early lactation period.
-(Drackley, 1999; LeBlanc, 2010)
- ◆ Higher DMI can reduce body fat mobilization and reduce metabolic disorders (ketosis, fatty liver) in the early lactation period.
-(De Vries & Veerkamp, 2000; Drackley et al., 2001; Hammon et al., 2013,)

Reproduction Benefits

- ◆ Energy intake may be the most important nutritional factor affecting reproduction. (Santos et al., 2009, Santos et al., 2009; Murphy et al., 2007)
- ◆ Inadequate energy intake in early lactation cows might reduce reproductive performance. (Butler and Smith, 1989; Butler et al., 1999, Santos et al., 2009; Santos et al., 2008)
 - Longer intervals to the first ovulation and first estrus
 - Higher incidence of silent estrus and lower conception rates
 - Longer calving intervals
 - Lower first service conception rates
 - More days open
- ◆ Increased DMI promotes better energy balance and reproductive performance of dairy cows. (Butler and Smith, 1989, Santos et al., 2009; Santos et al., 2008)

Milk Production Benefits

- ◆ DMI and the diet's net energy concentration determine the cow's total energy intake.
-(M.S. Allen, 2000)
- ◆ Energy intake is the primary limiter of milk yield for high producing cows.
-(M.S. Allen, 2000; Drackley et al., 2001)
- ◆ Increased DMI = More Milk

The FDA Functional Claim

Further evidence of the cow's ability to reap production and health benefits through greater DMI with Diamond V Original Product™ in the TMR



THANK YOU

What Questions Do You Have?



The Trusted Experts in Nutrition & Health™