native MICROBIALS

Galaxis Frontier: Academic Meta-analysis

TECHNICAL BULLETIN

GF Consistently Improves Feed Efficiency Across 8 independent Academic Trials

Eight independent academic studies were included in the meta-analysis: seven published in peer-reviewed journals and one completed but not yet drafted. All were randomized controlled trials using a covariate-based block design, with milk yield, components, DMI, and feed efficiency measured at the cow level (except Cornell, where intake was measured at the pen level). One of the eight studies evaluated two distinct treatment groups initiated at different stages of lactation; these were analyzed as separate study arms, resulting in nine total comparisons in the meta-analysis. Across trials, treatment duration averaged 20 weeks (range: 16–39), and while one study evaluated Jerseys, all others were conducted in Holsteins.

Feed efficiency improved by an average +0.05 points (range of true effect size = 0.03-0.08, p < 0.01)

Feed efficiency was measured as ECM/DMI in all studies except SDSU, which reported in units of milk/DMI. A leave-one-out sensitivity analysis confirmed the result is consistent across trials – pooled effect sizes from any eight of the nine studies ranged from 0.05 to 0.06 (p < 0.01).

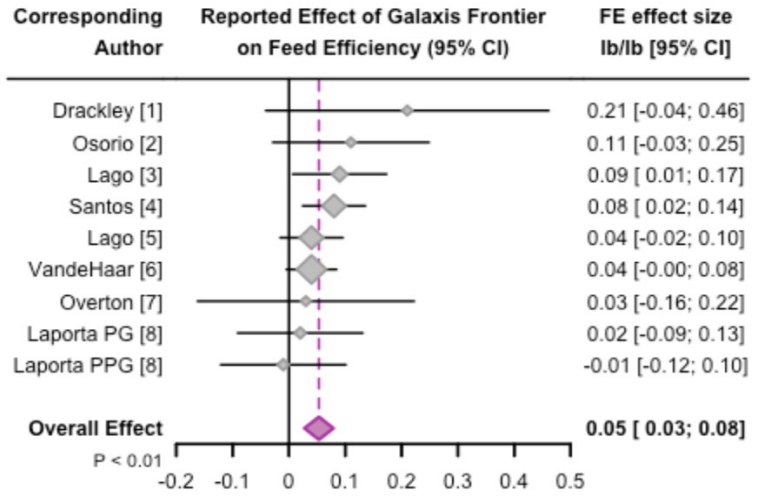

Figure 1. Average of reported effect sizes from studies that measured changes in feed efficiency (milk or ECM / DMI). Diamond size shows weight (inverse of variance).

response	covariate factor	FDR-adj. *p*-value
milk, fat, protein, or ECM yield (lbs)	DIM at enrollment	**<0.01**
	parity; time fed GF; milk covariate (standardized)	>0.19
dry matter intake (lbs)	DIM at enrollment	**<0.05**
	parity; time fed GF; milk covariate (standardized)	>0.64
feed efficiency (ECM/DMI)	DIM at enrollment, parity; time fed GF; milk covariate (standardized)	>0.58

Milk and components yield are greater when Galaxis Frontier is started early in lactation

This analysis tells us that stage of lactation at the start of supplementation—not baseline production, parity, or duration on Galaxis Frontier—**drives much of the variation in response.**

Mixed effect models showed that days in milk (DIM) when Frontier was started explains differences in milk, fat, protein, and energy-corrected milk (ECM) yield, as well as dry matter intake (p < 0.01).

No significant treatment-interaction effects were found for parity, production level, or time on product (all p > 0.05).

Studies enrolling animals <70 DIM showed improvements in production and efficiency[2,3,4,5,8]

- Milk +4.8 lbs (p=0.043)
- Fat +0.22 lbs (p=0.037)
- Protein not significant (p=0.120)
- ECM +5.0 lbs (p=0.049)
- DMI not significant (p=0.211)
- FE (ECM/DMI) +0.06 pts (p<0.01)

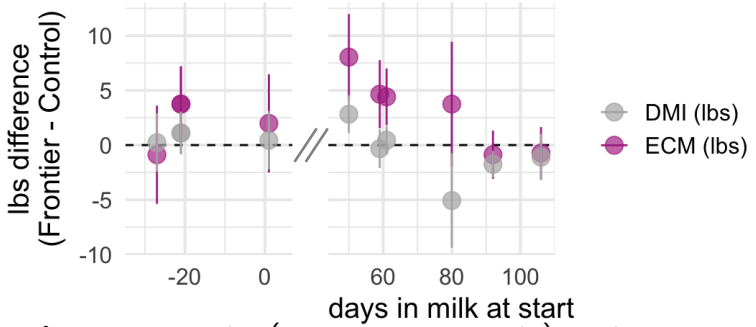

Figure 2. Production (energy-corrected milk) and intake results (dry matter intake) according to DIM at enrollment.

CITATIONS

1. Dickerson et al., 2022, *J. Dairy Sci.* 2. Bulnes et al., 2025, *J. Dairy Sci.* 3. Valldecabres et al., 2025 *J. Dairy Sci.* 4. Marinho et al., 2024, *J. Dairy Sci.* 5. Valldecabres et al., 2022, *J. Dairy Sci.* 6. Goldsmith et al., 2023, *J. Dairy Sci.* 7. *Ferro et al, 2022 ADSA poster.* 8. Tabor et al., 2025 *J. Dairy Sci.*