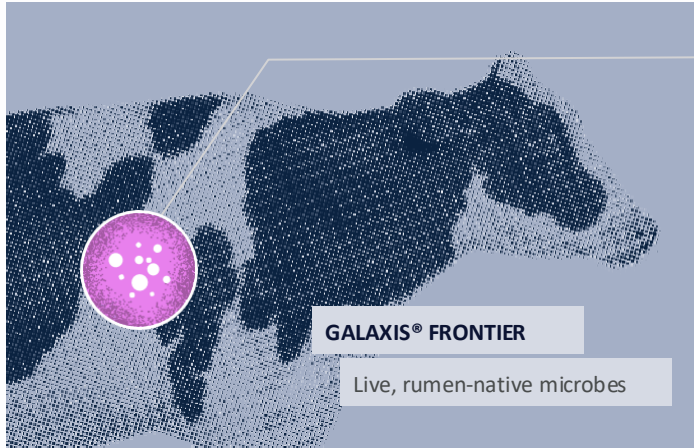


## Breakthrough Microbial Technology for Greater Cow Resilience, Efficiency & Productivity

Galaxis Frontier improves dairy herd efficiency, productivity and resilience. It is the industry's first and only live microbial feed additive isolated from the rumen, for the rumen. By modulating the genetics of the rumen microbiome, Galaxis Frontier triggers systemic hormonal shifts that enhance metabolism and stress responses.



5 grams/head/day. No cold storage required.



### *Pichia kudriavzevii* (DY21)

Synthesizes catalytic enzymes that degrade fiber



### *Clostridium beijerinckii* (DY20)

Produces volatile fatty acids (VFA) as a fermentation byproduct



### *Ruminococcus bovis* (DY10)

Resistant starch degrader, acetate producer, keystone species first isolated by Native Microbials



### *Butyrivibrio fibrisolvens* (DY19)

Biohydrogenates LCFA into the precursor to endogenously synthesized conjugated linoleic acid (CLA) in milk

## Better rumen genetics. Better health. Better production.

Native Microbials has spent over \$3 million validating Galaxis Frontier with some of the most prominent dairy scientists, producers, and nutritionists in the United States.

### Repeatable feed efficiency gains

8 independent, peer-reviewed academic studies

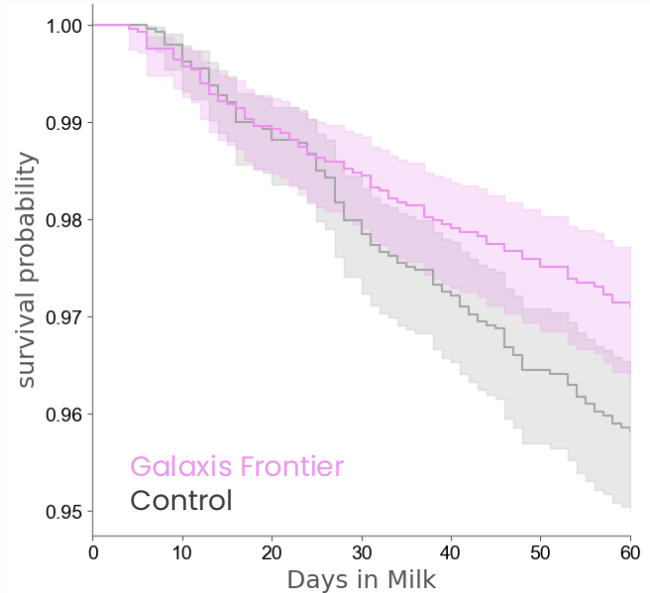
# +0.05 pts

Meta-analysis of reported effect sizes from academic studies measuring change in feed efficiency (milk or ECM / DMI)



### Increased herd health and livability

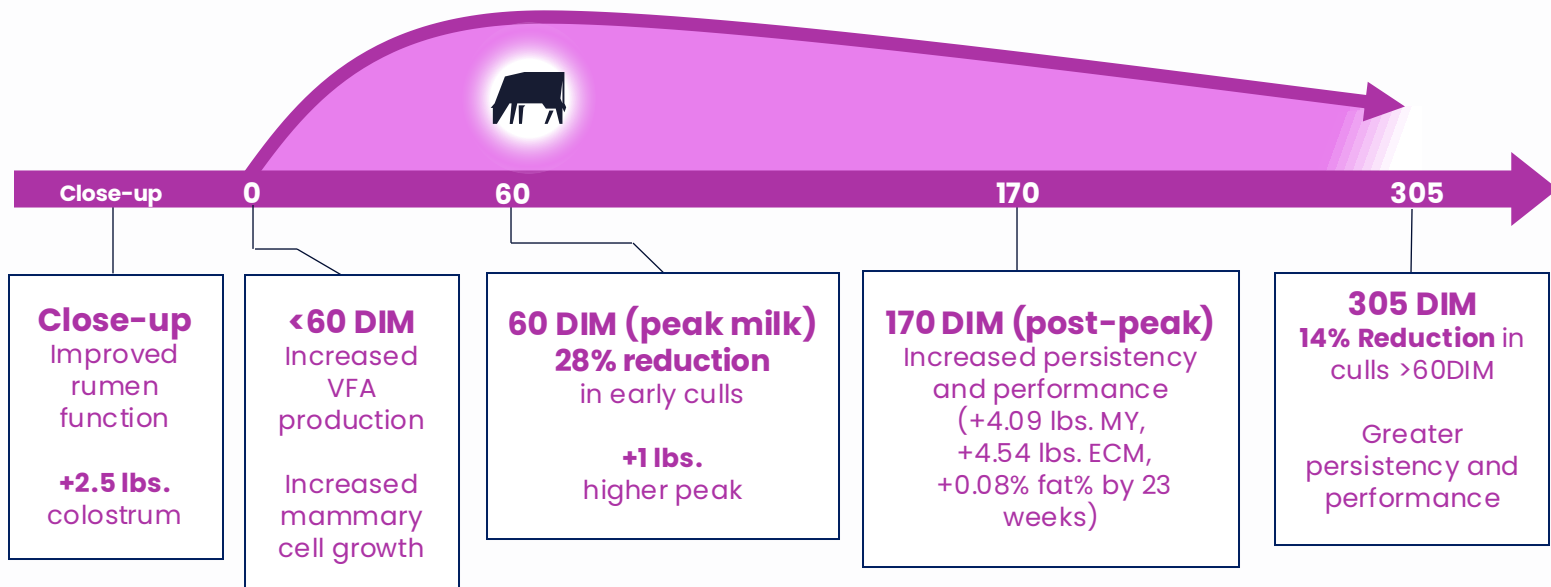
Real-world, commercial dairy trials



Average of **28% reduction in early cull rates** (<60 DIM) across 11 commercial treatment versus control sites

Breakthrough Microbial Technology for Greater Cow Resilience, Efficiency & Productivity

## What happens to a cow on Galaxis Frontier?



## What to expect when feeding Galaxis Frontier whole herd

After 12 months of feeding Galaxis Frontier to all lactating cows+ close-ups\*\*

**+2-4 lbs. MY**  
**+2-5 lbs. ECM**  
**+0.02 – 0.06 pts. FE**

\*\*Whole herd performance is multifactorial and influenced by variables such as management practices, forage variability, environmental conditions, and herd dynamics.\*\*

## Galaxis Frontier: Optimizing Rumen Microbial Genetics



- Whole cow benefits: improved health, welfare, productivity, sustainability
- Customer ROI >4:1



To view our customer testimonials, visit [www.galaxisfrontier.com/testimonials](http://www.galaxisfrontier.com/testimonials)

# Galaxis Frontier modulates hormones increasing mammary capacity and colostrum production

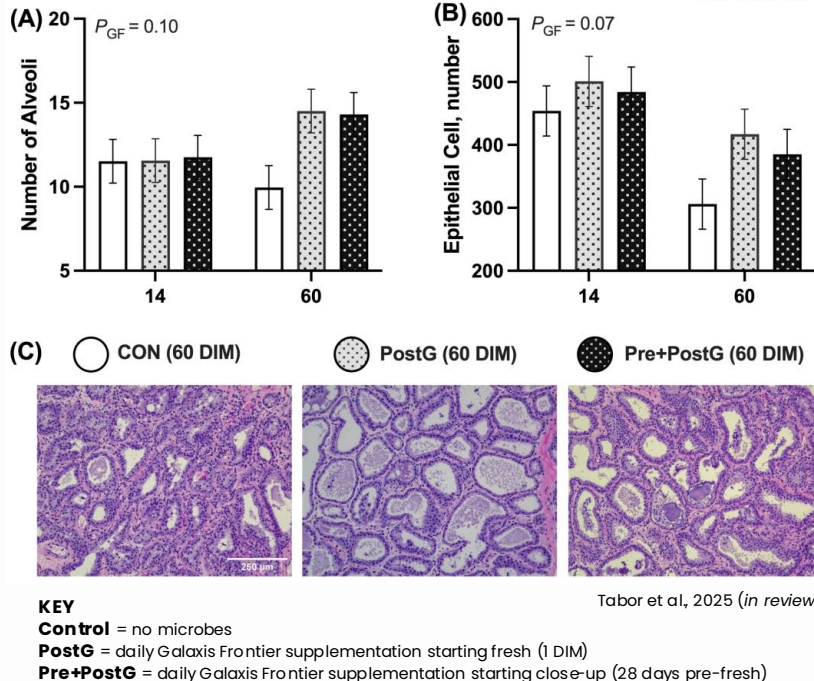
## Rumen genetics trigger hormonal shifts that increase mammary capacity

Supplementing the keystone organisms in Galaxis Frontier **reshapes rumen function**, driving:

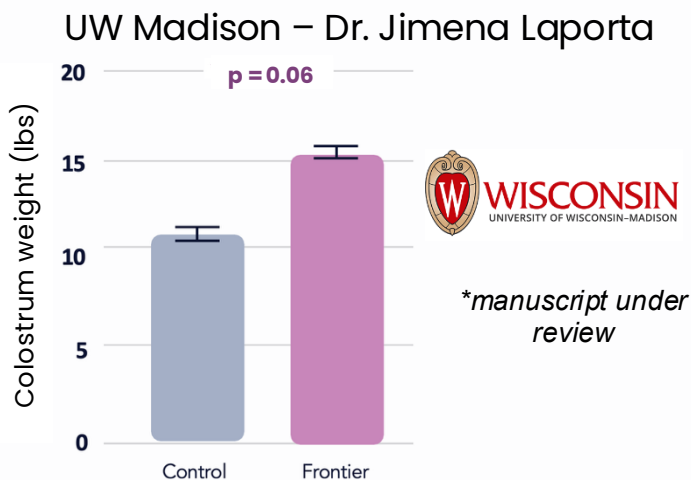
- Streamlined microbial diversity
- Enhanced ruminal SCFA production (propionate, acetate, isovalerate)
- Increased oxidative capacity for improved cellular resilience

This optimized rumen environment shifts systemic hormone signaling, leading to:

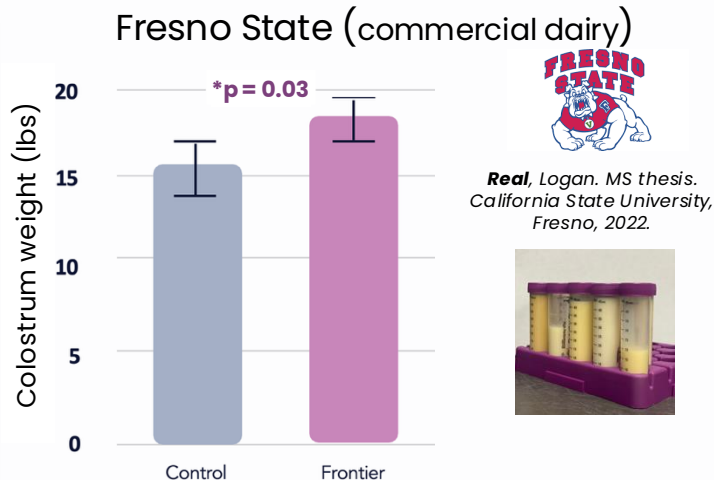
- More alveolar secretory units **(+20%)**
  - Increased mammary epithelial cell density **(+10%)**
- Greater capacity for milk precursor uptake and conversion when fed starting in early lactation



## Close-up pen supplementation leads to increased colostrum quality and quantity



	Control	Frontier	diff	P-value
# cows	40	20		
Weight (lbs)	11.7	16.1	4.4	<b>0.06</b>
Fat %	3.24	3.38	0.14	0.12
Fat (lbs)	0.38	0.54	0.17	0.11
Protein %	16.5	17.2	0.70	0.47
Prot (lbs)	1.72	2.71	0.99	<b>0.03</b>
IgG (g/L)	100	108	3.00	0.34



	Control	Frontier	diff	P-value
# cows	111	94		
Weight (lbs)	15.59	18.01	2.43	<b>0.03</b>
Fat %	5.08	6.13	1.05	<b>0.007</b>
Fat (lbs)	0.79	1.12	0.33	<b>0.001</b>
Protein %	14.34	14.68	0.34	0.56
Prot (lbs)	2.47	2.80	0.33	0.28
IgG (g/L)	85.88	84.80	-1.08	0.88

## COMMERCIAL TRIALS. 53,551 Trial Cows on 28 Dairies (161,400 Total Head)

Control vs. treatment trials on U.S. commercial dairies using matched pens with similar management, lactation stage, DIM, and production. Cows remained in open pens with routine movements, and individual cow time in trial tracked by ear tag scans. Final production was compared between control and Frontier groups in cows enrolled pre-peak after 12–29 weeks; on average after 23 weeks on Galaxis Frontier.

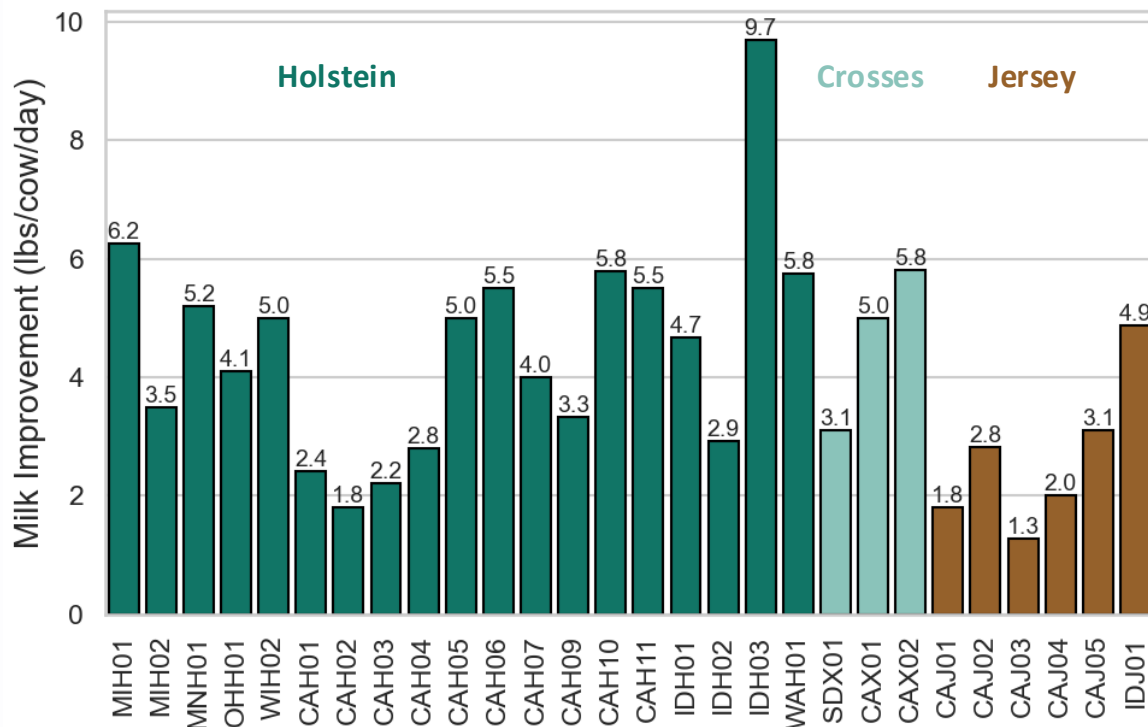
Farm Code	Weeks on product	State	Breed	Milk Improvement (lbs)	ECM Improvement (lbs)*	Fat % Improvement*	Avg group size
<b>Meta Analysis</b>	<b>23 weeks</b>			<b>4.09 (p &lt; 0.001)</b>	<b>4.54 (p &lt; 0.001)</b>	<b>0.08% (p = 0.0095)</b>	<b>775</b>
CAJ03	25	CA	Jersey	1.28	3.64	0.29%	910
CAH02	12	CA	Holstein	1.80	-	-	300
CAJ01	20	CA	Jersey	1.80	2.80	0.00%	320
CAJ04	25	CA	Jersey	2.00	4.00	0.15%	970
CAH03	13	CA	Holstein	2.20	-	-	745
CAH01	20	CA	Holstein	2.42	4.89	0.22%	1630
CAH04	25	CA	Holstein	2.80	-	-	150
CAJ02	17	CA	Jersey	2.82	5.51	0.18%	910
IDH02	24	ID	Holstein	2.92	3.55	0.17%	1045
SDX01	29	SD	J/X	3.10	-	-	1640
CAJ05	20	CA	Jersey	3.10	6.20	0.08	525
CAH09	22	CA	Holstein	3.33	3.86	-0.10%	515
MIH02	25	MI	Holstein	3.50	-	-	530
CAH07	22	CA	Holstein	4.00	5.00	0.01%	400
OHH01	20	OH	Holstein	4.10	4.75	0.04%	445
IDH01	26	ID	Holstein	4.67	-0.22	-0.03%	1135
IDJ01	26	ID	Jersey	4.88	-	-	3500
CAH05	25	CA	Holstein	5.00	-	-	680
CAX01	29	CA	H/J/X	5.00	-	-	650
WIH02	28	WI	Holstein	5.00	3.80	-0.04	540
MNH01	21	MN	Holstein	5.20	-	-	525
CAH06	24	CA	Holstein	5.50	5.6	0.13%	680
CAH11	24	CA	Holstein	5.50	-	-	700
WAH01	21	WA	Holstein	5.75	4.00	0.05%	600
CAH10	23	CA	Holstein	5.79	-	-	180
CAX02	27	CA	Crosses	5.80	6.55	0.06	460
MIH01	25	MI	Holstein	6.25	-	-	550
IDH03	29	ID	Holstein	9.70	8.80	0.03	400



# Galaxis Frontier makes healthier cows that produce more and stay in the herd longer

## Commercial Data: 53,551 Trial Cows on 28 Dairies (161,400 Total Head)

Control vs. treatment trials on U.S. commercial dairies using matched pens with similar management, lactation stage, DIM, and production. Cows remained in open pens with routine movements, and individual cow time in trial tracked by ear tag scans. Final production was compared between control and Frontier groups in cows **enrolled pre-peak** after 12–29 weeks; on average after 23 weeks on Galaxis Frontier.



Meta-analysis results:

+ 4.09 lbs MY  
( $p < 0.001$ )

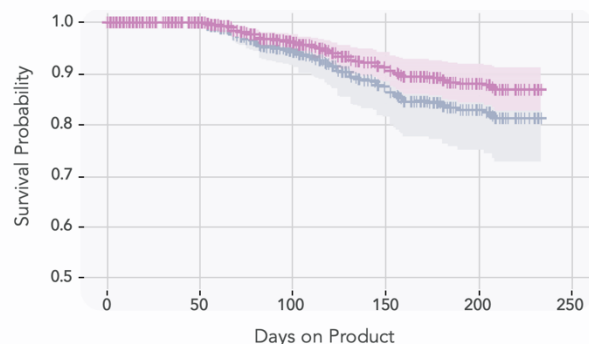
+4.54 lbs ECM  
( $p < 0.001$ )

+0.08% Fat  
( $p = 0.0095$ )

## Cows that consume Galaxis Frontier stay in the herd longer

Farm Code	Weeks on product	State	Breed	Culling Reduction*	Avg group size
	28.5			13% ( $p = 0.0002$ )	700
CAH05	25	CA	Holstein	31%	680
WAH01	21	WA	Holstein	29%	600
SDX01	34	SD	J/X	26%	1640
CAH06	24	CA	Holstein	25%	680
MIH02	25	MI	Holstein	25%	530
CAX01	29	CA	H/J/X	21%	650
OHH01	28	OH	Holstein	20%	445
CAJ04	34	CA	Jersey	19%	970
WIH02	36	WI	Holsteins	18%	540
CAH07	22	CA	Holstein	14%	400
CAJ02	21	CA	Jersey	12%	910
MNH01	24	MN	Holstein	10%	525
MIH01	29	MI	Holstein	9%	550
CAJ05	28	CA	Jersey	8%	525
CAH01	35	CA	Holstein	7%	1630
IDH03	29	ID	Holsteins	6%	400
CAH11	36	CA	Holsteins	0%	650
CAX02	34	CA	Crosses	-13%	400

We performed a Random-Effects meta-analysis across **18** independent commercial trials and found an average **13% reduction** in cull rates ( $p < 0.001$ ).







## REAL DAIRYMEN. REAL RESULTS.



Brent Wickstrom  
Wickstrom Jersey  
Farms Hilmar, CA



Brian Visser  
BAR 20 DAIRY  
Kerman, CA



Cornell Kasbergen  
RANCHO TERESITA DAIRY  
Tulare, CA



EJ De Jong  
WREDEN RANCH  
Hanford, CA



Garrison Fernandes  
LEGEND DAIRY WEST  
Tipton, CA



Gerrit Roeloffs  
G&A DAIRY  
Fresno, CA



Gregory Fernandes  
FERN OAKS FARMS  
Porterville, CA



Hank Doelman  
JAMES ROAD DAIRY  
Rochester, WA



Jacob de Jong  
PARKVIEW DAIRY  
Delhi, CA



Jared Fernandes  
LEGACY RANCHES  
Tipton, CA



Jason Nunes  
NUNES FAMILY FARM  
Buhl, ID



John Verway  
JOHANN DAIRY  
Fresno, CA



Louis Tristao  
TRI-STAR DAIRY  
Tulare, CA



Mal Machado  
PROVIDENCE DAIRY  
Buhl, ID



Tony Louters  
T & C LOUTERS  
Merced, CA



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### Galaxis Frontier: Optimizing Rumen Microbial Genetics

- Whole cow benefits: improved health, welfare, productivity, sustainability
- Customer ROI >4:1
- Customer Retention >90%