







### Heat up performance by cooling down stress.

Rumen fermentation for next-level efficiency.

Research-proven RumeNext®, created from plant extracts (botanical bioactive molecules), provides a natural solution for growing cattle.

- Helps mitigate the symptoms associated with the heat season (enhancing cattle comfort; alleviating symptoms of stress through favorable fermentation shift and heat dissipation),
- Drives performance and efficiency by acting as a natural alternative for favorably altering rumen fermentation (better fermentation means better production and rumen health),
- Shifts rumen fermentation to alter VFA ratios for beneficial results. This allows the animal to capture more energy from propionate instead of acetate to drive efficiencies. It also lessens the environmental impact by reducing nitrogen loss.

#### RumeNext is Research-Proven

In research trials with growing cattle consuming RumeNext versus controls, better gains and feed efficiency resulted along with lower arrival cattle morbidity and mortality.

# Meta-analysis of all RumeNext controlled research with growing beef cattle

Response	Control	RumeNext	$P \leq F$
Dry matter intake (lb/hd/day)	14.70	14.76	0.58
Average daily gain (lb)	3.06	3.15	0.06
Efficiency (feed:gain)	4.80	4.69	0.08

- More than a dozen studies in North America and Europe in both university and commercial research herds
- Diverse ration conditions (receiving and some finishing)
- 3 lb/ton equivalent of RumeNext (825400)

### Performance Payback

Rumen fermentation is the driving force impacting energy and protein availability. Nutritional management can drive better fermentation in the rumen, which in turn, drives better performance.

The payback can also be realized through conserving of feed resources. A Nebraska trial was conducted to determine the effects of feeding RumeNext in combination with Rumensin to finishing cattle during the hot summer months. The feed:gain conversion demonstrates an improved feed conversion rate per 1 lb of gain.

## Conserving feed resources during a heat event

RumeNext drives improved feed conversion. Total feed costs and cost of gain are less for cattle fed RumeNext.





RumeNext + Rumensin

Rumensin



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#### RumeNext drives ...

#### Feed intake Proven to favorably alter the uniformity of feed

intake – More consistent feed intake spread across the feeding period has definite rumen health advantages by minimizing the drop in rumen pH, lessening the potential for rumen upset and resulting health concerns such as acidosis, laminitis, founder, bloat, and ulcers.

Water intake Cattle fed RumeNext have also shown higher water consumption and more saliva production, and since saliva is the primary source of rumen buffer for cattle, more rumen pH protection is offered.

#### RumeNext in "natural beef" programs

RumeNext is a natural choice to enhance production of cattle that are fed in "natural beef" programs.

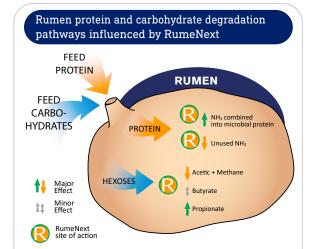
RumeNext is ideal to use in situations where it is preferable not to use an ionophore, such as feed mills manufacturing feed for multiple species, horse safety concerns, and intake concerns (pasture mineral and starter/receiving rations).

#### RumeNext performance with natural cattle

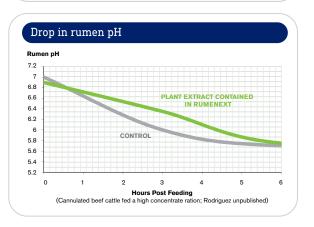
Response	Control	RumeNext	P <u>&lt;</u> F
Initial weight (lb)	891	865	0.26
Final weight (lb)	1283	1295	0.73
Dry matter intake (lb/hd/day)	23.6	24.0	0.77
Average daily gain (lb)	3.8	4.1	0.20
Efficiency (feed:gain)	6.16	5.72	0.16
Carcass characteristics			
HCW (lb)	803.0	837.5	0.20
Backfat (cm)	86.3	91.3	0.75
LMA (cm²)	1.40	1.36	0.09
Yield grade	3.05	2.84	0.28
Marbling	533	519	0.71
Value (\$/hd)	\$1,010	\$1,037	0.55

#### RumeNext drives fermentation

- Altering VFA production Fermentation is directed at increasing the proportion of propionate while lowering acetate. Capturing more energy from the diet drives productivity.
- Capturing more ammonia-nitrogen as microbial protein – Enables more effective protein utilization for greater production while reducing nitrogen loss as ammonia.



Marked steps indicate those where RumeNext intervenes, leading to a reduction in excess ammonia-nitrogen and an increase in ammonia-nitrogen captured as microbial protein, and where RumeNext intervenes to alter the ratio of propionate to acetic.





ADM (JAS abstract T258, 2009)