



Cellulo-Gest®

Feed Additive

- Specifically for use in forage-based rations for ruminants
- A uniquely formulated enzyme supplement designed to deliver performance based on optimal fiber digestibility

Nutritional programs are designed to enhance animal performance and to optimize production efficiency. Forage is the foundation of beef and dairy feeding programs and optimizing its utilization is key to driving performance. Microbes within the rumen effectively produce enzymes to digest fiber components. However, utilization may be optimized by improving the digestibility of hemicellulose and cellulose components in forage.

Cellulo-Gest® feed additive is a specifically formulated enzyme supplement designed for use in forage-based rations for ruminants including lactating cows, replacement heifers and in grazing and forage-based rations for beef cattle. *Aspergillus oryzae* and *Aspergillus niger* provide the enzymatic activity in Cellulo-Gest® feed additive.



FEATURES	BENEFITS
Fiber Digestibility Optimizer Blend	Optimal fiber digestibility supports dry matter intake, energy intake and production of acetate, butyrate and propionate. Responses in lactating dairy cattle include: - Higher levels of FCM, milk protein and butterfat - Optimized body condition Responses in beef cattle include: - Higher level of ADG - Optimized body condition

Recommended Inclusion Level

DAIRY CATTLE		BEEF CATTLE	
Dry cows	10 g/h/d	Cow	5 g/h/d
Lactating cows	10 g/h/d	Calves	2 g/h/d
Replacement heifer	5 g/h/d	Stockers/growers	3 g/h/d
Calves	2 g/h/d	Finishing (grass-fed)	4 g/h/d

Trials with Cellulo-Gest® Feed Additive

IN VITRO DIGESTIBILITY

Aspergillus oryzae and *Aspergillus niger* provide the enzymatic activity in Cellulo-Gest® feed additive. This broad spectrum of enzymes, including amylase, hemi-cellulase, cellulase, glucanase and pectinase, supports NDF (fiber) digestibility.

In situ 24-hour dry matter disappearance of various feedstuffs with and without Cellulo-Gest® feed additive (North Dakota State University research study, 2013).

ROUGHAGE TYPE	CONTROL	CELLULO-GEST® FEED ADDITIVE
Corn stover	36.9	43.6
Mixed hay	45.0	50.6
Mixed straw	38.7	43.6
Corn silage	63.3	68.2

DAIRY COWS IN LACTATION: IMPACT ON MILK YIELD

Two studies were conducted at Pennsylvania State University. The first study was a 3×3 Latin-square design with 28-day treatment periods using 18 lactating dairy cows at 115 ± 42 days in milk housed in a tie-stall barn. The second study was an eight-week study with 48 lactating dairy cows between 60-120 days in milk housed in a Calan gate barn. Cows were offered Cellulo-Gest® feed additive at 10 g/head/day.

	STUDY 1			STUDY 2		
	Control	Cellulo-Gest® feed additive	P-value	Control	Cellulo-Gest® feed additive	P-value
Dry matter intake, lb.	55.6	55.3	0.53	51.6	54.0	0.03
Milk yield, lb.	87.5 ^a	89.9 ^{ab}	0.03	71.2	74.1	0.07

GROWING BEEF CATTLE: IMPACT ON AVERAGE DAILY GAIN

A trial conducted at North Dakota State University used 172 weaned steer calves (initial body weight of 610 lb.) blocked by weight into 16 pens. Cattle were fed for 82 days starting Fall of 2012. Treatments were Control or Cellulo-Gest® feed additive (4 g/head/day). All rations contained Rumensin® at 300 mg/head/day. Diet was rolled corn, corn silage, distillers modified grain, rolled barley and switchgrass hay-based and offered an NEg of 52 Mcal/cwt.

	CONTROL	CELLULO-GEST® FEED ADDITIVE
Dry matter intake, lb.	23.42	23.58
Average daily gain, lb.	3.87	4.04
Feed: gain	6.03	5.84

To learn more about Cellulo-Gest®, visit FortivaImpact.com or talk to your Fortiva representative.