



PRO-BLEND

Supplements

PRO-BLEND Livestock Supplement

Please select from the following options:

Visible Results

Labels & Best Use

PRO-BLEND Livestock Supplement

Visible Results - Look for changes in...

- [Mastication](#)
- [Chewing and Jaw Rotation](#)
- [Appetite & Intake](#)
- [Enzymes for Energy](#)
- [Fecal Matter](#)
- [Livestock Comfort](#)
- [Livestock Action & Interaction](#)

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Look for changes in...

- Mastication

- Mastication is the process by which food stuffs are broken down when chewed.
- Saliva is produced from the saliva gland in the oral cavity.
- Saliva carries important alkalizing enzymes.
- There is no better buffer than saliva.
- Enzymes keep the stomach acids in the safe pH range.
- Fiber digesting bacteria enjoy a balanced pH.

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Look for changes in...

- Chewing and Jaw Rotation

- Chewing is an important first step in the digestive process.
- This is especially true for ruminants, as it breaks down membranes of cellulose fiber, liberating nutrients.
- Chewing also breaks down food particles, increasing surface area.
- Digestive enzymes can only work on the surface of the food.

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Look for changes in...

- Chewing and Jaw Rotation

- A cow will chew at a normal rate of 55 jr/m (jaw rotations per minute)..



- Increasing jr/m increases production of beneficial saliva and enzymes.



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Look for changes in...

- **Appetite & Intake**
 - High producing dairy animals should consume 3.5% of their body weight in dry matter each day.
 - Appetite determines intake.
 - Intake drives production.

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Look for changes in...

- Enzymes for Energy

- Enzymes are food that help to maintain a healthy digestive system.
- Enzymes are energy needed for proper digestion. The body uses energy to produce what it needs.
- Digestive enzymes are a food extract proven to increase the rate the body can repair, restore and strengthen.

continued →

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Look for changes in...

- Enzymes & Energy
 - Using digestive enzymes energy will:
 - conserve the body's energy
 - improve pre-digestion
 - improve rate of digestion
 - improve microbial attachment
 - improve palatability
 - create synergy with enzymes from rumen microbes.

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Look for changes in...

- Fecal Matter
- CONSISTENCY:
 - Not utilizing protein, consistency will be hard.
 - Utilizing too much protein, consistency will be very loose.
 - Homogenized consistency is an indication of efficient digestion.

continued →

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Look for changes in...

- Fecal Matter

COLOR:

- When proteins and energies are not digesting properly, a tendency to see darker fecal sample is observed.
- When proteins and energies are digested properly, a lighter color is evident.

continued →

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Look for changes in...

- Fecal Matter

STARCH & SMELL:

- Many times under poor digestion, the smell will be more offensive due to lack of starch digestion.
- Most times excessive soluble protein is under-utilized and will increase ammonia.
- Often resulting in a very strong (eye-burning) ammonia smell
- This scenario is inefficient and may cause body weight loss.

continued →

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Look for changes in...

Fecal Matter:

Before



After



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Look for changes in...

Fecal Matter:

Before

ENERGY		
TDN (estimated)%	59.98	11.92
Net Energy (lac) MCAL/kg	1.24	0.25
Net Energy (gain) MCAL/kg	0.78	0.15
Net Energy (maint) MCAL/kg	1.36	0.27
OTHER		
Starch	16.49	3.28
WTDN	75.06	14.92
WNEL	1.45	0.29
WNEG	0.72	0.14
WNEM	1.44	0.29

16.49

After

ENERGY		
TDN (estimated)%	48.14	8.35
Net Energy (lac) MCAL/kg	1.02	0.18
Net Energy (gain) MCAL/kg	0.32	0.05
Net Energy (maint) MCAL/kg	0.86	0.15
OTHER		
Starch	8.00	1.39
WTDN	71.79	12.45
WNEL	0.89	0.16
WNEG	0.29	0.05
WNEM	1.01	0.17

8.00

approx. 50% difference in Starch

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Look for changes in...

- Livestock Comfort
 - Over-feeding starch (grain), may cause ulcerations in the rumen wall.
 - Ulcerations lead to Laminitis, which is non-reversible.
 - Clear signs of discomfort are:
 - very slow mobility
 - rocking (shifting their weight from side to side)

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Look for changes in...

Livestock Action & Interaction

- Animals that feel good have more of a tendency to interact
- More interaction during times of ovulation
- More visual and stronger heat signs

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Look for changes in...

- Livestock Performance
- Immune Response
- Competitive Exclusion
- Somatic Cell Counts

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Look for changes in ...

- **Livestock Performance**
 - Based on lactation curve, cows will perform differently in the early part of lactation as opposed to late.
 - After peak, cows will typically persist in the range of 85-95%, depending on genetics and management.
 - Monitoring the herd is very important to see production changes.
 - Monitoring the herd by energy groups help to observe productivity. For example, whole herd is divided into 3 energy groups:

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Look for changes in...

- Livestock Performance
 - Group 1: Negative Energy Transition Group
 - 0-30 days in milk
These cows have gone from a dry cow diet to a milking cow ration, given birth and now newly into production).
 - 31-120 days in milk
These cows are not able to take in enough feed stuffs to balance their output needs.
These cows would be asked to milk off body weight.

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Look for changes in...

- Group 2: Neutral Energy Group

- 121-200 days in milk

Production drops, intake should maintain, indicating a balance of output and intake.

- Group 3: Positive Energy Group

- 201-305 days in milk

Production drops to the point that intake increases body weight gains.

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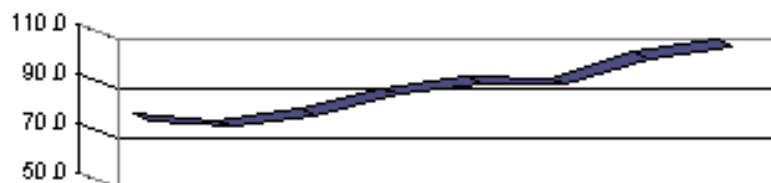
Look for changes in...

- Livestock Performance (cont'd)
 - Variables that are monitored include:
 - Milk Production
 - Stage of lactation
 - Percent of herd
 - Milk Kgs/Pounds
 - Butterfat
 - Protein
 - Somatic Cell Count
 - See sample of reports/graphs by energy group →

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Look for changes in...

Milk Production
(Negative Energy Group)



ALL 0-100 day cows

Customer DNYC028	Aug 7 06	Oct 19 06	Nov 19 06	20-Jan-07	19-Feb-07	30-Mar-07	29-Apr-07	28-May-07
TOTAL ALL COWS	68	83	87	103	103	107	99	83
TOTAL ALL 0-100	23	35	22	23	20	18	7	3
% OF HERD	34%	42%	25%	22%	19%	17%	7%	4%
AVG. MILK/DAY	75.6	73.0	77.6	86.2	90.4	89.7	100.4	105.3
AVG. % PROTEIN	2.7	2.9	2.7	2.7	2.7	2.8	2.8	2.7
AVG. % BUTTERFAT	3.0	3.6	3.1	3.4	3.1	3.4	3.3	3.1
AVG. SCC (000)	466	130	122	341	133	370	141	27
AVG. DAYS IN MILK	61	74	59	70	57	72	83	62
Persistency:		96.55%	106.29%	111.12%	104.85%	99.25%	111.93%	104.88%

continued →

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Look for changes in...

- Immune Response:
 - Proposed Modes of Action:
 - Produces antibacterial compounds (bacteriocins and hydrogen peroxide)
 - Creates conditions incompatible for pathogens
 - Produces or stimulates enzymes
 - Stimulates immune response
 - Metabolizes undesirable compounds
 - Mycotoxin degradation

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Look for changes in...

- **Competitive Exclusion:**
 - Compete with potential pathogens:
 - Pre-emptive colonization
 - Aid digestion
 - Produce enzymes that digest carbohydrates
 - Supply nutrients to the host
 - B Vitamins
 - Create conditions that stimulate other beneficials
 - Eg. anaerobis in rumen
 - Mycotoxin degradation: lactic bacteria

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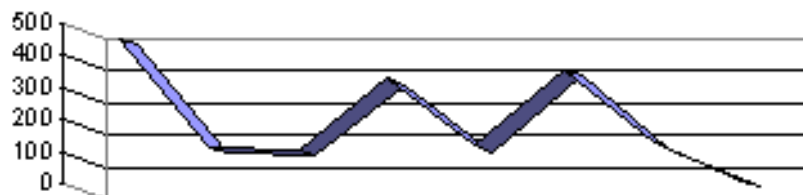
Look for changes in...

Somatic Cell Count:

- Somatic cell counts in the milk is a direct indication of the animal's health.
- When considering probiotics, SCC should be a first positive indicator.
- See sample of reports/graphs by energy group →

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Somatic Cell Count
(Negative Energy Group)



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LIVESTOCK Dairy, Beef or Bison Calf (Newborn & Transition)

Pro-Blend (Powder)

For challenged & stressed animals, digestive upsets or scouring, apply bullet every 4 to 6 hours:

PRO-BULLET:

- 4 grams (4 pumps) Liquid
 - 4 grams Slippery Elm
 - 2 Probiotic Capsules
-
- Open one capsule, combine thoroughly
 - Leave 2nd capsule in tact
 - Combine the above ingredients into a bullet shape the size of your thumb.
 - Deliver capsule to back of animal's tongue allowing for easy swallowing

Newborn and Transition Livestock

Dairy, Beef or Bison

During or just after birth:

7 grams per day: Mixed in Concentrate, or Direct to Oral Cavity.

Directions for use:

Feeding instructions are based on animal weight, as follows:

Under 100 lbs	1/8 ounce	Under 45 kg	3.5 grams
100-200 lbs	1/4 ounce	45-90 kg	7 grams
200-400 lbs	3/8 ounce	90-180 kg	14 grams
400-600 lbs	1 ounce	180-270 kg	28 grams
600-900 lbs	1 1/2 ounces	270-400 kg	43 grams
Over 900 lbs	2 ounces	Over 400 kg	57 grams

Product can be mixed into animal's feed.

Store in a cool, dry place and keep bag tightly closed.

Parasites & Competitive Exclusion

1 part 'Pro-Blend' Powder

1 part Diatomaceous Earth

1 part Sea Kelp Powder

1 part Vitamin Mineral Blend

Mix thoroughly and apply as free choice treatment for two 10 day cycles (with 10 days in between cycles.) Do this twice a year or as directed.