

priority
IAC™



PRODUCT GUIDE OF MICROBIOLOGY



priorityiac.com
The Smartbacteria & Nutrition Company

For Healthy Animals
7th Edition

TABLE OF CONTENTS



Our Story	3
Smartbacteria	4
Principles of Microbiology Nutrition	6
Smartbacteria Products	
P-One™	10
Gold Spike®.....	12
Calf Gold™ 3E	14
StartUp™ Gel.....	16
Showmen’s Choice™	18
Priority Pellets™	19
Chopper’s Choice™	20
Manufactured by the Inventor.....	21
Mineral Products	
Ocean Minerals™	22
TracePac Gold™	23
Sheep & Goat	24
Equine	26
Swine and Poultry	28
Somaya Life / Maya Pet	30



**FOR
HEALTHY
ANIMALS**

PRESIDENT'S PERSPECTIVE

All life begins with microbiology.

Priority IAC is a 25-year-old, family owned start-up company that has grown to establish an international presence. Growing up on the family dairy, I took on a love for animals and their well-being. This has created the passion "for healthy animals" and led me to become a steward to the animal kingdom, and life on this planet.

At the age of 20, I was called upon to fulfill a dream of developing one of the best purebred genetic breeding establishments recognized worldwide. This was a profound experience, working with the breed's very best. But it was also an experience of defeat with great animal loss, due to an error in formulation. I have studied animal nutrition and rumen microbiology and I see the world as ever evolving. I believe what we once knew to be true may no longer be true. This allows one to see things as they are.

Microbiology is the basis of our existence. Without, all would cease to exist. Many things have changed within the environment that have disrupted the ruminal base of profound beneficial bacteria; of which we call *Smartbacteria* – the 1st Ingredient of Microbiology Nutrition.

We are the first to bring forth the principles of Microbiology Nutrition. And now, Ocean Minerals, a combination of ocean-derived ingredients specifically formulated to be truly used in digestion. Not only does this help to balance the needs of the animal, but also the chemistry and polarity of the body. This concept also applies to the soil, as the waste is the fertilizer and goodness to the soil. Thus, a three-pronged approach: *Smartbacteria*, Ocean Minerals and Nutrition, to support the growth of those organisms.

In the lab, precise measures need to be taken for optimal bacterial growth including temperature, pH, and nutrition. However, this concept is often lost in the field when doing animal nutrition; little attention is given to the needs of the bacteria. Microbiology Nutrition supports the concept of feeding the animal for optimal bacterial growth. Nutrition feeds the microbiology, microbiology feeds the body.

I am *Richard V. Breunig*



“

I know firsthand the many facets of animal husbandry that affect the production and well-being of animals. The forages, the fermentation, the nutrition, the soil, the weather, and most importantly, the digestive health of the animal. I am proud of the work that I've done improving the lives of animals, and it is my honor to continue to work for those who care for them.

*Richard V. Breunig,
Founder of Priority IAC*



SMART BACTERIA

Not all bacteria are created equal. For healthy animals, the specific bacterial strain truly matters. Priority IAC uses the most advanced microbiological, molecular-based, and DNA sequencing methods to identify and select the unique strains of bacteria that provide the best performance in animals. We call these strains **Smartbacteria**. Our unique strains of **Smartbacteria** are the most impactful, targeted, and beneficial naturally occurring bacteria available on the market today, each with its own tried-and-tested function within the digestive tract.

Only the most effective strains of bacteria make the cut to be Priority IAC's **Smartbacteria**. We understand how to find and perfect those unique needle-in-a-haystack strains that make a real difference in cow health and productivity. These **Smartbacteria** are only found in Priority IAC products, with their presence and formulation in each product serving a specific role and function in the digestive health of the animal.

pH IS THE KEY TO LIFE

What is pH?

pH is the measurement of the acid or base.

Why is pH important?

The pH balance in animal and human bodies are essential for the proper functioning of the body as it helps in jumpstarting biochemical reactions and creating the right environment for organs to function. It also helps in controlling the availability of nutrients, biological functions, microbial activity, and the behavior of chemicals.

Where is the optimal rumen pH?

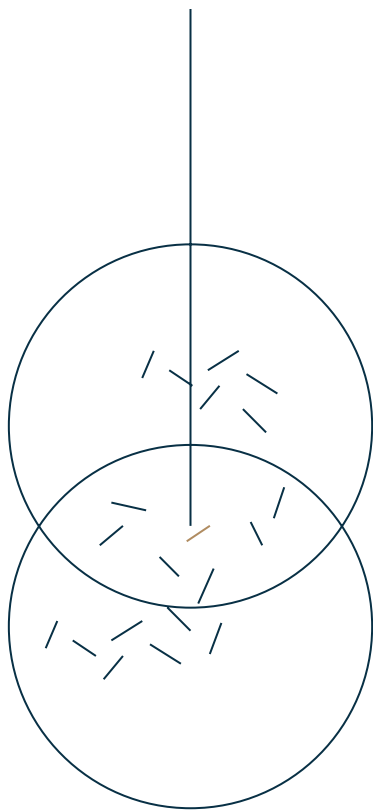
The optimal rumen pH is 5.8 to 6.6. This is the ideal environment for optimal microbial growth.

Reading a pH scale

0.1 movement in pH from 6 to 5.9 is a 1 fold change or 100% increase in acidity. 1 point movement in pH from 6 to 5 is a 10 fold change or 1000% increase in acidity.

H+ Ion Conc. vs. Distilled Water

pH scale	H+ Ion Conc. vs. Distilled Water			
	pH	H+ Ion Conc.		
	14	1/10,000,000		
	13	1/1,000,000	>	Bleach
	12	1/100,000		
	11	1/10,000		
	10	1/1,000		
	9	1/100		
	8	1/10		
	7	1		
	6	10	>	Optimal Rumen pH 5.8-6.6 (0.8 range)
	5	100		
	4	1,000		
	3	10,000		
	2	100,000		
	1	1,000,000		
	0	10,000,000	>	Battery Acid



Improper pH can cause:

- Constipation/Diarrhea
- VMS (Variable Manure Syndrome)
- Bloody Gut or HJS
- Poor Reproductive Performance
- Subacute and Acute Acidosis
- Laminitis
- Environment for Pathogen Growth

Proper pH provides:

- Rumen stability
- Optimal rumen bacterial growth
- Rapid utilization of glucose and lactic acid producing more VFAs (Volatile Fatty Acids) and microbial protein (energy and protein for the cow)

UNIQUE SMARTBACTERIA

Priority IAC products include unique strains of *Smartbacteria*, which were found among the trillions of strains on Earth.

Gut Enhancers

Elevate the microbiome

A2020™ , <i>Lactococcus lactis</i>	Uses sugars and has anti-inflammatory properties
A4000h™ , <i>Pediococcus pentosaceus</i>	Efficiently uses 5 and 6 carbon sugars
LP100™ , <i>Lactobacillus plantarum</i>	Integrates with the intestine to fight off disease-causing bacteria
LC222™ , <i>Lactobacillus casei</i>	Helps regulate the digestive system
EF141™ , <i>Enterococcus faecium</i>	Efficiently use sugars
LBR1000™ , <i>Lactobacillus brevis</i>	
8G-134™ , <i>Bacillus velezensis</i>	

Gut Managers

Works on gut acid

Prop1-IAC™ , <i>Propionibacterium jensenii</i>	Consumes acid
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Pathogen Inhibitors

Blocks unwanted invaders

B5000h™, B50005™, B5150™ , <i>Bacillus subtilis</i>	Inhibit harmful pathogens
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Immune Communicators

Regulates immune action

1E-1® , <i>Lactobacillus reuteri</i>	Modulates the immune system
2E-1™ , <i>Enterococcus faecium</i>	Supports immune response

*Each Smartbacteria is described and verified by its genus (i.e. *Lactobacillus*), species (e.g., *reuteri*), and strain name (e.g., 1E-1®). 1E-1® is the branded strain.



GUIDELINES OF MICROBIOLOGY NUTRITION

Nutrition feeds the microbiology, microbiology feeds the body.

What is Microbiology Nutrition?

It is the pairing of two fields: Nutrition and Microbiology. We use a select group of *Smartbacteria* to metabolize carbohydrates correctly and then support with novel nutrition for optimal growth – and now the introduction of Ocean Minerals.

How does Microbiology Nutrition allow one to change the way cows are fed?

Energy is the limiting factor for all bodily functions. Without enough energy, one cannot achieve optimal performance. *Smartbacteria* stabilizes the rumen and allows one to safely meet energy demands for all bodily functions in a way that is natural and healthy to the cow.

Why is P-One the “1st Ingredient”?

Each animal has its own specific microbiome. By feeding the *Smartbacteria* in P-One, we are bringing a group of cows closer to a similar microbiome to respond to the same fed TMR. Nutrition feeds the microbiology, microbiology feeds the body.

What is 8G-134?

A profound new discovery of *Smartbacteria*. Studies have shown this organism has the ability to convert glucose directly to VFAs, thus bypassing lactic acid production. This provides an additional level of reducing lactic acid accumulation in the prevention of acidosis.



Why does pH matter?

To optimize bacterial growth, it begins with pH. The rumen is a fermenter, and to maximize bacterial growth, there needs to be a consistent level of the optimal pH. Once achieved, the results are increased VFAs and microbial protein, which are the nutrients for the body. Nutrition feeds the microbiology, microbiology feeds the body.

How does Microbiology Nutrition improve transition cow performance?

Transition cows need energy to prevent ketosis. During this time, there are many changes occurring which can throw off the microbiome. Microbiology Nutrition allows energy to be safely utilized during the preparation of calving, when intakes drop, and post-calving to meet the instant energy demand.



Principles

Does the rumen need particle size “scratch factor”?

Logical thinking doesn't agree with either. The animal is a grazer; she wants nothing long but rather she eats the top of the plants that are very wet. She needs to chew to approximately 3/4" length to get it down her throat and to the reticulum, then brings up the cud for additional chewing. This is to get the pieces smaller and wetter for utilization and fermentation.

How does one reduce intakes and get the same or more milk?

Intakes are reduced by removing undigestible ingredients such as straw or poor hay. This space can be used for usable energy; the cow will have her energy needs met on a lower intake. By doing this, the body doesn't expel energy to rid waste or undigestible ingredients, resulting in more milk on lower intakes. This is profitability and efficiency.

Is there a benefit to driving intakes?

The goal is to have the most milk on the least intake. It is more logical and efficient to drive ration density.

Why feed to an empty bunk?

The true ration is one that is eaten in its entirety. Feeding 23 hours to an empty bunk develops a pattern of consistency, much the same as consistent milking times increase performance. This consistency in feeding and milking creates consistent cow patterns for enhanced production.

Why does one need to feed 10% over the cow numbers?

In a one-group TMR, there are varying intakes among those eating the ration. Fresh cows and heifers cannot eat to the ration dry matter, therefore are not getting all the small but very valuable ingredients. By feeding 10% over cow numbers with all ingredients in ratio, the fresh cows and heifers will be closer to meeting their needs. The high-producing cows are eating the 10% over, meeting their high production needs as well.



Minerals

Are trace minerals important in Microbiology Nutrition?

Trace minerals are extremely important in Microbiology Nutrition. Trace minerals support the body and play an important role in the growth of bacteria. Trace minerals come in several forms, from those that are antagonistic and aren't readily available, to those that are readily available.



Corn

Is corn the only source of energy?

Microbiology Nutrition looks at energy from all sources rather than just corn. In the presence of Smartbacteria, energy becomes a non-issue. There are four sources of energy: corn, sugars, silage acids, and fermentable fiber (NFC). The earlier a forage is made, the more fermentable fiber there will be, adding to the total ration energy load.

When do we recommend ground corn?

Finely ground dry corn is recommended on small dairies to help ensure no mold or yeast issues. By having it finely ground, this allows for more surface area for Smartbacteria to attach onto. However, high-moisture corn is the best choice as it's already hydrated, thus readily used and available in fermentation.

Can an all-corn silage ration be fed to milk and dry cows?

Yes, to both! Corn silage is a combination of corn and forage. It's the easiest to grow, harvest, and store. Corn silage holds milk cows consistent in all areas, which also enhances performance.

Dry cows don't have a lot of demands, other than meeting protein, mineral, and daily energy needs. When those needs are met, she is done for the day, thus, they may be out of feed for hours. There is no need for poor hay or straw as this has no nutritional value and disrupts post-calving performance.



Protein

Can cows be healthy if their MUNs are below 10?

Yes, MUN is a measure of wasted or unused protein that takes energy to expel, many times in the form of foot abscesses. Protein and energy need to be balanced for optimal bacteria growth.

How does the rumen make its own protein?

In rumen fermentation, there is a constant growth and death of bacteria. This process creates microbial protein. This naturally made protein is approximately 50% crude protein that is perfectly amino acid balanced by nature. This comes free in abundance with a stable rumen environment.

Why use roasted beans and soybean meal?

Roasted beans provide a natural source of fat, needed as an additional source of energy (calories) and for reproductive efficiencies. Roasted beans are the only source of protein that have a high combination of protein and fat per pound. Soybean meal brings another source of high-density protein per pound.

Can I feed all roasted beans as a single source of protein?

Yes, however, a combination of roasted beans and soybean meal will meet the protein needs quicker and cheaper, adding to the density concept.





Ration Information

Are there less ingredients in a Priority Ration?

Yes, many times 10-15 ingredients are not needed compared to conventional rations.

How quickly does one make a ration change?

All ration changes are immediate with the inclusion of P-One™.

Why does Priority encourage wetter feeds?

With wetter feeds, more organic acids will be produced in fermentation. Organic acids provide better protection from mold and yeast issues. Also, wetter feeds will yield higher soluble protein, which means less purchased protein, and higher NDFD30hr, providing more fermentable fiber for energy and butterfat.



Improvements

How would one get more milk?

More milk is possible by making forages early and wet, having no mold issues, excellent reproduction, consistent feeding and milking times, monitoring ingredient dry matters, and forage testing when needed.

How would one get better components?

Better components come from making forages early and wet. The wetter the forage, the more fermentable fiber and organic acids will be available in rumen fermentation, resulting in more naturally made amino acids, which are the precursors to components.



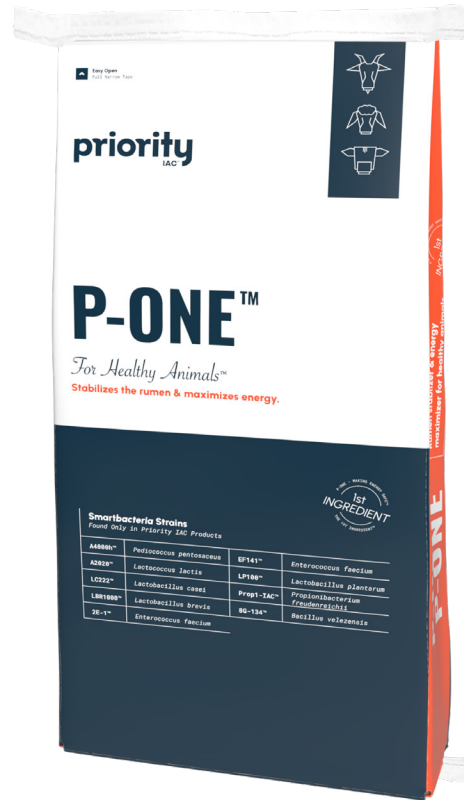


P-ONE™

The 1st Ingredient™

**Stabilize the rumen
and maximize energy.**

P-One, the microbiology, is fed daily and contains nine of our meticulously researched and developed Priority Smartbacteria strains. These strains stimulate lactic acid utilization in the rumen and maintain a healthy population of beneficial bacteria in the lower intestinal tract. By feeding P-One daily, the cows' microbiome profiles become more unified, optimizing energy transport and allowing them to benefit similarly from the same TMR. Nutrition feeds the microbiology, microbiology feeds the body.



Smartbacteria Strains

Found Only in Priority IAC Products

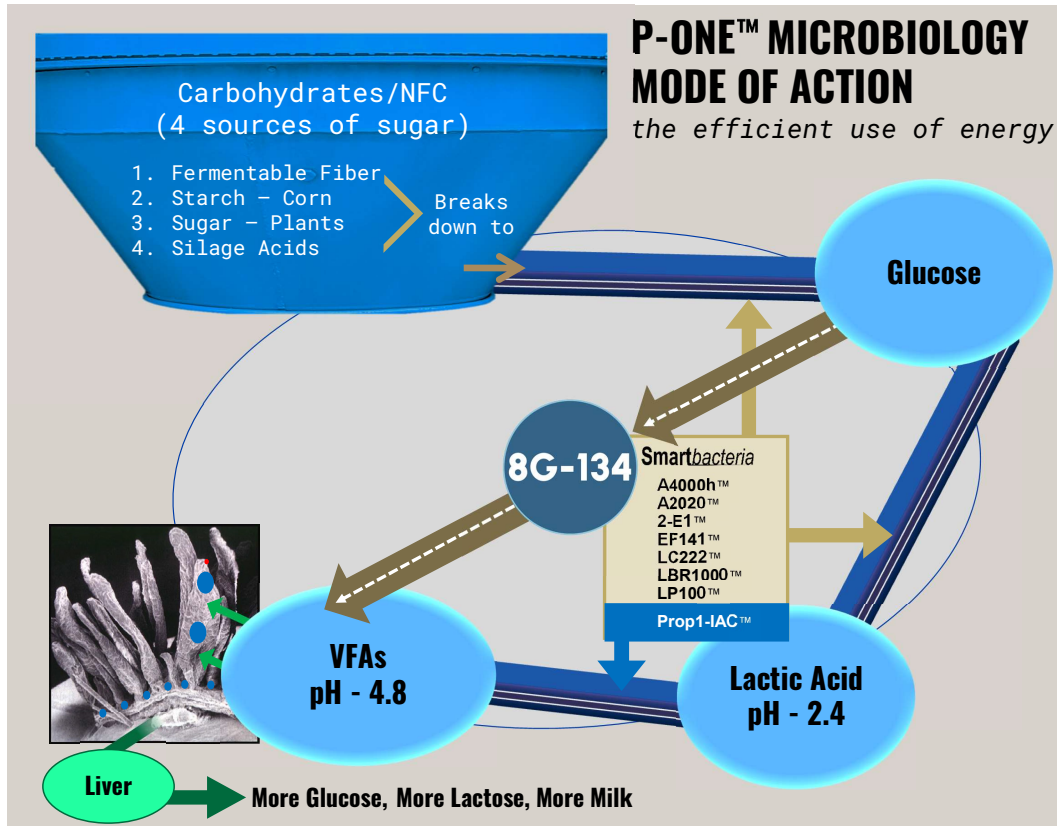
A4000h™	<i>Pediococcus pentosaceus</i>
A2020™	<i>Lactococcus lactis</i>
2E-1™	<i>Enterococcus faecium</i>
EF141™	<i>Enterococcus faecium</i>
LC222™	<i>Lactobacillus casei</i>
LBR1000™	<i>Lactobacillus brevis</i>
LP100™	<i>Lactobacillus plantarum</i>
Prop1-IAC™	<i>Propionibacterium jensenii</i>
8G-134™	<i>Bacillus velezensis</i>

Available in: 25lb Bags

For optimal synergy feed with TracePac Gold™ Smart Release Crystals™ or Ocean Minerals™

View the full details. >>>





Microbiology - Keeping the Rumen Stable

Feeding rapidly fermentable carbohydrates (finely ground, processed, and highly fermentable feeds) can increase milk production, but have a negative impact on the digestive tract.

P-One optimizes energy transport through efficient carbohydrate metabolism. Research shows these Smartbacteria balance rumen pH and work on gut acid, which allows the feeding of rapidly fermentable carbohydrates safely. This is the 1st Ingredient™ in nutrition, making energy safe.

Abstract Presented at ADSA (American Dairy Science Association)

Rumen pH sampling from 11,000 cows using a cross section of post fresh and high producing cows, each sampled three times.

Summary of Seven pH Field Studies

(Diets averaged 43.5% NFC + 29.4% Starch)

444 Samples	pH Mean	4 Hours	7 Hours	10 Hours
	6.66	pH 6.69	pH 6.66	pH 6.65

The normal ruminal pH indicator of SARA is <5.5 (Oetzel, 2001). When using oro-ruminal probes as this study did, it is adjusted 0.4 to <5.9, (Duffield; 2004).

TMR + Hand Fed Feeding Instructions

Cows	Amount/Day	Scoop/Day
Normal Producer	0.04 lbs(18g)	1 Scoop
High Producer	0.05 lbs(23g)	1 ¼ Scoop
Extreme Heat or Stress	0.06-0.09 lbs (28g - 40.8g)	1 ½ - 2 ¼ Small Scoops
Close Up + Dry Cows	0.04 lbs(18g)	1 Scoop
Weaned Calves + Growing Heifers	0.021bs (9g)	½ Scoop

Energy (VFA): Butyric, acetic, and propionic acid; more energy for the cow.

Microbial Protein: The more carbohydrates, the more bacteria, the more microbial protein. Microbial Protein is 50% crude protein - 100% amino acids.

GOLD SPIKE®



Think Outside the Bottle...
Microbiology to Support Immune
Health

Gold Spike is an oral, non-drug option,
helping those who want an alternative to
antibiotics.



Smartbacteria Strains

Found Only in Priority IAC Products

1E-1®	<i>Lactobacillus reuteri</i>
B5000h™	<i>Bacillus subtilis</i>
B5005h™	<i>Bacillus subtilis</i>
B5150h™	<i>Bacillus subtilis</i>
8G-134™	<i>Bacillus velezensis</i>

Available in:

Capsules for immediate immune need
(32 count and 96 count containers)

Powder for daily use in TMR and calves
(21b, 121b, and 251b containers)

View the full details. >>>



Pathogen Management

Research shows B5000h™, B5005h™, and B5150h™ help reduce growth of pathogens.

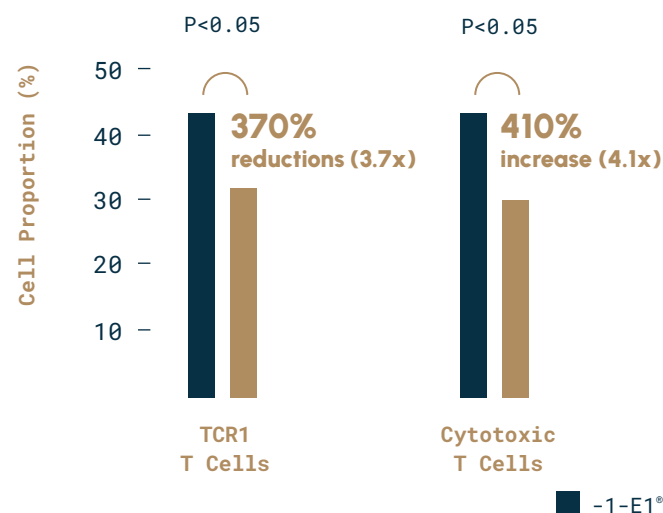
Target Pathogen	Activity Measure*
S. aureus	+++
Vibrio sp.	++
E. coli	+
Legionella sp.	+++
Flavobacterium psychrophilum	+

*As based on lab scale studies using clearance zone data. + moderate activity, ++ good activity, +++ strong activity

Supports T Cell Immune Development

T cells are white blood cells that are part of the body's immune system. White blood cells defend your body against disease, cancer, infections, and foreign pathogens. The body has Helper T cells (TCR1) which identify and present disease or infection and Cytotoxic T cells that directly attack and destroy these infected cells.

Research shows 1E-1® found in Gold Spike® increases the number of Helper T cells by 370% and Cytotoxic T cells by 410%. This works with the immune system to identify and fight off foreign pathogens that cause infection throughout the body.



Immune Modulation

1E-1® acts like a “signal caller” for the immune system. Research shows 1E-1® helps to enhance immune response in the gastrointestinal tract by quieting the pro-inflammatory response responsible for the symptoms caused by pathogenic infections. Data shows a reduction in E. coli and Coliforms.

Powder Feeding Instructions* - Calves

Birth-14 Days	1 Small Scoop Twice/Day
15 Days-Weaning	1 Small Scoop Once or Twice/Day
GI Tract & Immune Support	2 Small Scoops Twice a Day for 3-5 Days

*For optimal synergy use with Calf Gold-3E

Capsules Feeding Instructions* - Cows

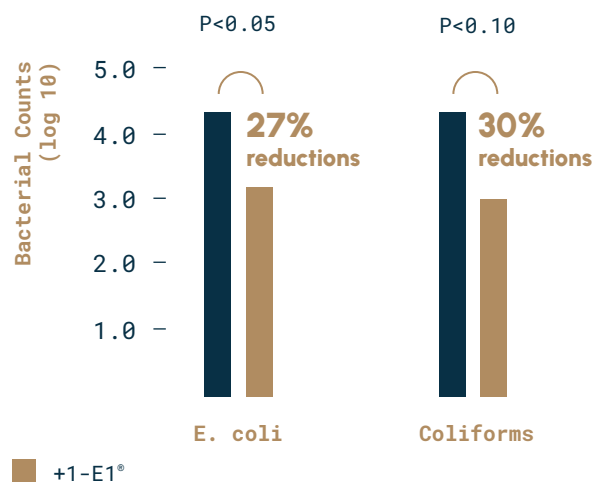
Support Normal Milk + Optimal Immune	2-4 Capsules Once or Twice/Day for 3 Days
Support Udder Health	1-2 Capsules Per Day for 3 Days

*For optimal synergy use with P-One

Powder Feeding Instructions* - Cows

GI Tract & Immune Support	1 Large Scoop for 3-5 Days
Support Udder Health	1/3-1 Small Scoop Daily in TMR or Top Dress

*For optimal synergy use with P-One





CALF GOLD 3E™

Microbiology for Calf Development

Calf Gold 3E helps support calf health by delivering a large population of unique strains of *Smartbacteria*; helping protect the calf from disease-causing pathogens, while working to help establish a functioning rumen.

- Aids in establishing a functioning rumen.
- Cost effective, 6 gram inclusion.
- Helps inhibit pathogen growth.



Smartbacteria Strains

Found Only in Priority IAC Products

A4000h™	<i>Pediococcus pentosaceus</i>
A2020™	<i>Lactococcus lactis</i>
2E-1™	<i>Enterococcus faecium</i>
EF141™	<i>Enterococcus faecium</i>
LC222™	<i>Lactobacillus casei</i>
LBR1000™	<i>Lactobacillus brevis</i>
LP100™	<i>Lactobacillus plantarum</i>
B5000h™	<i>Bacillus subtilis</i>
B5005h™	<i>Bacillus subtilis</i>
B5150h™	<i>Bacillus subtilis</i>
8G-134™	<i>Bacillus velezensis</i>
Prop1-IAC™	<i>Propionibacterium jensenii</i>

Available in:

21b, 121b, and 251b containers

View the full details. >>>



Pathogen	A4000h™	A2020™
Salmonella typhimurium	X	X
Salmonella S1a	X	
Salmonella S2a	X	
Salmonella Ark3	X	
Salmonella Ark	X	
Salmonella WP-Z	X	
E. coli 0157:H7	X	
E. coli B117	X	
E. coli 24	X	X
E. coli 20		X
E. coli B44		X
Clostridium perfringens		X

Research Shows

The top chart shows the effective inhibition that the unique strains found in Calf Gold 3E™ have on pathogens. *Smartbacteria* A4000h™ and A2020™ produce potent compounds called bacteriocins, which have been shown to inhibit and kill pathogens.

The bottom chart shows how *Smartbacteria* B5000h™, B5005h™, and B5150h™ help reduce the growth of pathogens, including *Clostridium perfringens* A by 89%, *E. coli* by 100%, and *Salmonella* by 99%. Research shows that 2E-1™ helps to enhance immune response as it is delivered through the gastrointestinal tract and reduces inflammation. By reducing inflammation, 2E-1™ allows the immune system to respond to challenges, while helping to allocate energy more efficiently for calf growth.

Research indicates that when fed together, a combination of anti-inflammatory 2E-1™ and the pathogen reduction delivered by B5000h™, B5005h™, and B5150h™, helps improve calf performance.

In addition 8G-134™ and Prop1-IAC™ use glucose and lactic acid efficiently.

Target Pathogen	Activity Measure*
S. aureus	+++
Vibrio sp.	++
E. coli	+
Legionella sp.	+++
Flavobacterium psychrophilum	+

*As based on lab scale studies using clearance zone data. + moderate activity, ++ good activity, +++ strong activity

Feeding Instructions - Calves

Cool milk replacer to 110°F (43.3°C) or less before mixing in Calf GOLD 3E. Provide fresh clean water to calves at all times.

Birth - Weaning	1 small scoop twice a day
Additional Support When Stressed	2 to 3 scoops twice a day



STARTUP™ GEL

StartUp your animal with powerful Smartbacteria.

- Easy to use, concentrated gel or capsules.
- Stimulates water and feed consumption.
- Starts calves, fresh cows, and cows off feed.

Experience why producers call it "the magic gel."

Smartbacteria Strains

Found Only in Priority IAC Products

A4000h™	<i>Pediococcus pentosaceus</i>
A2020™	<i>Lactococcus lactis</i>
2E-1™	<i>Enterococcus faecium</i>
EF141™	<i>Enterococcus faecium</i>
LC222™	<i>Lactobacillus casei</i>
LBR1000™	<i>Lactobacillus brevis</i>
LP100™	<i>Lactobacillus plantarum</i>

Available in:

Gel (60g and 300g tubes)

Capsules

(32 count and 96 count containers)

View the full details. >>>



StartUp Gel or Capsules...

Delivers a powerful concentration of eight unique strains of **Smartbacteria**. When administered, the **Smartbacteria** activate to help keep animals of any age on feed or bring them back on feed in times of transition, birth, calving, feed changes, shipping, stress, and weaning.

They are an effective approach to start the rumen and stimulate rumination as it delivers a large population of **Smartbacteria**. This activates in the rumen and jumpstarts digestion. This rapid production is a key component of rumination. This process stimulates the cow to eat, getting the digestive system back up and running. Additionally, this activation produced by the **Smartbacteria** facilitates the consumption of water, which is another key component to getting animals back on track and digestion running correctly.

Both gel and capsules function in the rumen to help improve the conversion of lactic acid and glucose to energy as a large quantity of A4000h™ and A2020™ work to maintain a stable rumen pH and efficient rumination. The 2E-1™ enhances immune response while reducing inflammation. Also delivered is live celled yeast and yeast culture to assist in bacterial growth.

StartUp™ Gel is a concentrated, mess free drench in special packaging, which provides a barrier of protection and stability for microorganisms. This allows the product to maintain a 15 month shelf life stored at room temperature, while being conveniently ready to go when needed.



StartUp Gel Feeding Instructions

Animal	Condition	Feed
Dairy/Beef Cattle*	To support digestive health during calving, feed changes, moves, and shipping.	15g
Dairy/Beef Cattle*	Additional support of digestive health.	300g
Dairy/Beef Cattle*	Fresh cows/post calving/transition cows.	300g
Calves**	At birth to support digestive health.	15g
Calves**	Additional support of digestive health.	60g
Piglets	To support digestive health at birth and processing	15g

**For optimal synergy, feed with P-One **For optimal synergy, feed with Calf Gold 3ETM*

StartUp Capsules Feeding Instructions

Dairy/Beef Cattle	Use during feeding changes, at calving, prior to shipping, after antibiotic therapy to support digestive health.
1-2 capsules daily until dry matter intake returns to normal levels.	

For optimal synergy, feed with P-One daily following capsule administration.

SHOWMEN'S CHOICE™

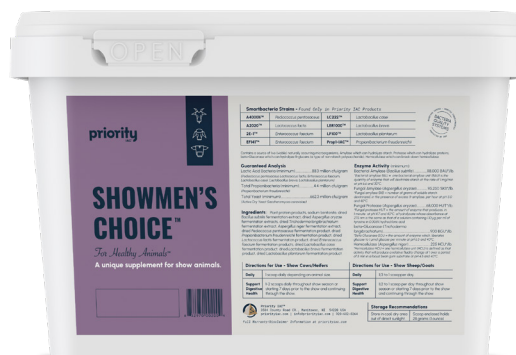
Specially formulated to help keep the digestive system on track before, during, and after shows.

Showmen's Choice is scientifically designed to help maintain a healthy rumen and gastrointestinal tract when fed daily. It contains unique strains of *Smartbacteria* A4000h™ and A2020™ that research shows utilize 83 times more glucose. It stimulates lactic acid use in the rumen and works in the lower intestinal tract to maintain a healthy population of beneficial bacteria. Field studies find these unique strains of *Smartbacteria* balance rumen pH.

Available in:

8lb and 16lb containers

View the full details. >>>



Smartbacteria Strains

Found Only in Priority IAC Products

A4000h™	<i>Pediococcus pentosaceus</i>
A2020™	<i>Lactococcus lactis</i>
2E-1™	<i>Enterococcus faecium</i>
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LP100™	<i>Lactobacillus plantarum</i>
Prop1-IAC™	<i>Propionibacterium jensenii</i>
8G-134™	<i>Bacillus velezensis</i>

Feeding Instructions - Show Cows/Heifers

Daily	1 Scoop Depending on Animal Size
Support Digestive Health	1-2 scoops daily throughout show season or starting 7 days prior to the show and continuing through the show.



PRIORITY PELLET™

for Show Heifers

- 50% high protein content
- No non-protein nitrogen source
- Proprietary combination of protein sources to maximize frame development and growth
- Non-medicated, reduces risk of immune and breeding problems
- Includes Ocean Minerals™; a complete combination of vitamins, macro, and micro nutrients to support healthy hair growth, healthy skin and immunity.

Feeding Instructions - Show Heifers

Pellets should be fed with Showmen's Choice along with low-quality grass hay. This product contains supplemental selenium. Feed at a rate not to exceed 0.3 ppm supplemental selenium on a complete ration dry matter basis.

Contact your Priority IAC Consultant for additional feeding recommendations.

Available in: 50lb bags
View the full details. >>>



THE SHOW PRODUCTS

Showmen's Choice™

Keeps digestive system on track before, during, & after show.

Gold Spike® Capsules

For gelling, swelling, & mastitis due to stress from bagging.

StartUp™ Gel

A powerful rumen booster to help stimulate water and feed consumption.

Priority Pellet™ for Show Heifers

High protein 50% pellet, non-medicated, frame growth promoting, optimal reproduction. Formulated with Ocean Minerals.

Ocean Minerals™

A complete proprietary combination of vitamins, macro, and micro nutrients. Seaweed derived ocean calcium, magnesium, and numerous other minerals act as a Smartbacteria catalyzer, creating the near perfect natural environment to initiate bacterial growth in support of Microbiology Nutrition.

*Refer to page 22 for more information



CHOPPER'S CHOICE™

Selected Smartbacteria produce organic acids, which are key to forage preservation.

Chopper's Choice Inoculants provide more Smartbacteria for both sugar and starch forages at a high concentration of 125,000 cfu/g.

Water Soluble Formula

- Works fast
- Uniform application
- Delivers live bacteria to the crop

Unique Stabilization Technology

- Maintains bacterial viability
- Helps prevent applicator clogging



Smartbacteria Strains

Found Only in Priority IAC Products

LP100™	<i>Lactobacillus plantarum</i>
P1500™	<i>Pediococcus acidilactici</i>
A2020™	<i>Lactococcus lactis</i>
A4000h™	<i>Pediococcus pentosaceus</i>
LB0828™	<i>Lactobacillus buchneri</i>

Feeding Instructions

Soluble Inoculants	Applies 125,000 cfu/gram on 500 tons haylage or silage
Buchneri Inoculants	Applies 500,000 cfu/gram on 200 tons Corn Silage or 750,000 cfu/gram on 132 tons HM Corn per jar
Dry Inoculants	Applies 150,000 CFU/gram on 50 tons haylage or silage

Available in:

View the full details. >>>



Soluble Inoculants
(500 forage tons per jar)



Buchneri Inoculants



Dry Inoculants
(50lb bag)





MANUFACTURED BY THE INVENTOR

At Priority IAC, preserving the authenticity, viability, stability, and high quality of our products is of utmost importance. We follow a strict Bacteria Quality System by using state-of-the-art techniques in genome sequencing and fermentation. All of our products are manufactured at our headquarters in Manitowoc, Wisconsin, under expert guidance. Our expertise in manufacturing is a natural extension of our family-owned business, ensuring top-notch products and excellent customer service through modern production systems.



THE FIRST OF ITS KIND! OCEAN MINERALS™

A complete proprietary combination of vitamins, macro, and micro nutrients. Seaweed derived ocean calcium, magnesium, and numerous other minerals act as a *Smartbacteria* catalyzer, creating the near perfect natural environment to initiate bacterial growth in support of Microbiology Nutrition.

- Complete combination of vitamins, macro, and micro nutrients
- Highly bio-available trace minerals
- Highly available Ocean Minerals
- Helps improve reproduction
- Helps reduce fresh cow issues
- Efficient - same product for milk cows, dry cows, heifers, beef and equine
- One product vs. inventorying many ingredients
- Frees up dry matter space in the ration

Ocean Minerals contains true Ocean Fish protein to support health by providing a rich source of essential amino acids that are the building blocks for proteins, critical for growth, repair, and immune function. Additionally, its unique nutrient composition may help balance the body's bioelectrical frequency, supporting cellular communication and overall energy harmony.

Ocean Minerals contains a selected blend of polyphenols that are plant compounds that act as antioxidants by neutralizing free radicals, chelating metals, regenerating other antioxidants, and modulating enzyme activity to reduce oxidative stress, protect cells, and promote overall health.



Available in: 50lb bags
View the full details. >>>



Guaranteed Analysis

Calcium, min	14.0%
Calcium, max	15.0%
Magnesium, min	6.2%
Sodium, min	14%
Chloride, min	21%
Protein, min	2.4%
Selenium, min	40 ppm
Vit A, min	302,000 IU/lb
Vit D3, min	123,000 IU/lb
Vit E, min	1,315 IU/lb
Vit E, eq	1,315 IU/lb

Feeding Instructions

Feed to dairy cows at a rate not to exceed 0.3 ppm supplemental selenium on a complete ration dry matter basis.

This product contains supplemental selenium and copper. Caution should be used when feeding sheep that are sensitive to copper.

TRACEPAC GOLD™

Smart Release Crystals™

Highly bioavailable crystalline forms of trace minerals to maximize availability, utilization, and absorption.

A proprietary combination of trace minerals featuring Smart Release Crystals naturally occurring in a crystalline matrix, essential vitamins, and a viable source of selenium.

All minerals support microbial growth, but trace minerals have the most impact. TracePac Gold Smart Release Crystals are in a form that's highly available, in support of microbial growth, to enhance immune function, which benefits reproduction.

Not a source of macro minerals.



Available in: 40lb bags
View the full details. >>>



Features and Benefits

- Formulated to provide each nutrient at a level which meets or exceeds NRC (National Research Council) guidelines.
- Optimal levels of Vitamins A, D3, and E improve metabolism of carbohydrates, fats, and proteins and optimize mineral utilization.
- Contains organic ingredients.
- Exclusive formulation designed to minimize negative mineral interactions (no sulfates) and maximize the benefits of minerals and vitamins to enrich nutrition.
- Fortifies the ration with the most cost effective, bioavailable minerals and vitamins essential for support of health, growth, immunity, reproduction, and milk production.
- High potency minerals allow for lower feed rates, leaving more space for other ingredients.
- Naturally occurring crystals minimize dust for ease of handling.

Guaranteed Analysis

Calcium, min	19.5%
Calcium, max	22.5%
Magnesium, min	6.0%
Selenium, min	407 ppm
Vit A, min	2,075,000 IU/lb
Vit D3, min	1,005,000 IU/lb
Vit E, min	10,000 IU/lb

Feeding Instructions

Feed to dairy cows at a rate not to exceed 0.3 ppm supplemental selenium on a complete ration dry matter basis.

This product contains supplemental selenium and copper. Caution should be used when feeding sheep that are sensitive to copper.



Sheep/Goats

P-ONE™

The first ingredient to stabilize the rumen and maximize energy.

Feeding Instructions - Sheep & Goats

Feed 0.02 lbs per head per day 2 weeks prior to kidding through lactation.

Store in a cool dry area, out of direct sunlight and avoid extreme heat

*Refer to page 10 for more information

SHOWMEN'S CHOICE™

Specially formulated to help keep the digestive system on track before, during, and after shows.

Showmen's Choice is scientifically designed to help maintain a healthy rumen and gastrointestinal tract when fed daily. It contains branded strains of **Smartbacteria A4000h™** and **A2020™** that research shows utilize 83 times more glucose. It stimulates lactic acid use in the rumen and works in the lower intestinal tract to maintain a healthy population of beneficial bacteria. Field studies find these branded strains of **Smartbacteria** balance rumen pH.

Feeding Instructions - Sheep & Goats

Feed Daily: 1/3 - 1 (1oz scoop)

During show season: Feed 1/2 - 1 (1oz scoop) daily

Store in a cool dry area, out of direct sunlight and avoid extreme heat.

*Refer to page 18 for more information



GOLD SPIKE®



Think Outside the Bottle...Microbiology to Support Immune Health.

Gold Spike is an oral, non-drug option for immune support, helping those who want an alternative to antibiotics.

Feeding Instructions - Sheep & Goats	
Maintenance Support	1 small scoop daily
GI Tract & Immune Support	1 large scoop daily for 3 days
Normal Milk Support	2 large scoops daily for 3 days - continue if necessary
Support Flock Udder Health	1/3-2/3 small scoop daily

Feeding Instructions - Lambs & Kids	
Birth Through Weaning	1/3 small scoop twice daily
GI tract & Immune support	2/3 small scoop twice daily for 3-5 days
Normal Milk Support	2 large scoops daily for 3 days - continue if necessary
Support Flock Udder Health	1/3-2/3 small scoop daily

Store in a cool dry area, out of direct sunlight and avoid extreme heat. Refrigerate to extend shelf life.

*Refer to page 12 for more information

STARTUP™ GEL

StartUp your animal with powerful Smartbacteria.

StartUp™ Gel delivers a powerful concentration of eight branded strains of *Smartbacteria*. When administered, the *Smartbacteria* activate to help keep animals of any age on feed or bring them back on feed in times of transition, birth, feed changes, shipping, stress, and weaning.

- Easy to use, concentrated gel.
- Stimulates water and feed consumption.
- Re-starts animal when off feed.

Feeding Instructions	
Sheep & Goats	60 grams - additional support for digestive health
Lambs & Kids	5 grams at birth

Store in a cool dry area, out of direct sunlight and avoid extreme heat.

*Refer to page 16 for more information





GOLD SPIKE®

For Healthy Animals™

Gold Spike is an oral, non-drug option, helping those who want an alternative to antibiotics.

For optimum synergy feed in combination with E-One™



Available in:
2 lb and 8 lb containers

Feeding Instructions

For GI tract and immune support, one large scoop daily.

For maintenance: One small scoop daily

For GI tract support: One large scoop daily

Small scoop = 3 grams | Large scoop = 28 grams

Store in cool, dry area out of direct sunlight and avoid extreme heat. Refrigerate to extend shelf life.



STARTUP™ GEL

For Healthy Animals™

StartUp™ Gel delivers a powerful concentration of seven branded strains of **Smartbacteria**. When administered, the **Smartbacteria** activate to keep horses on feed or bring them back on feed in times of transition, birth, feed changes, transportation, and stress.



Feeding Instructions

Foals	15 grams as needed	At birth up to 10 days or weaning & worming for 2-3 days
Yearlings & Horses	15 grams daily	During antibiotic therapy, shipping, and to support digestive health
	300 grams as needed	Additional support of digestive health

Store in a cool dry area for best product stability. For optimal synergy feed in combination with E-One™.



*Refer to page 12 for more information

*Refer to page 16 for more information

E-ONE™

For Healthy Horses™



Daily feeding to support digestive health.

Scientifically identified **Smartbacteria** work with the digestive system and prevent performance issues that stem from diets containing high-quality hay and/or high-energy grain.

Available in:

2 lb, 8 lb, and 16 lb containers

E-One™ Feeding Instructions

Top dress daily only.

Horse	Amount/Day	Scoops/Day
<ul style="list-style-type: none"> Active adult – not fed grain Weighs less than 500 lbs 	7.5 grams	½ scoop
<ul style="list-style-type: none"> Gestating mare Active riding horse fed grain Geriatric horse Performance/show horse in training 	15 grams	1 scoop
<ul style="list-style-type: none"> Additional digestive support 	30 grams	2 scoops

Store in a cool dry area out of direct sunlight.
1 scoop = 15 grams

Smartbacteria Strains

Found Only in Priority IAC Products

A4000h™	<i>Pediococcus pentosaceus</i>
A2020™	<i>Lactococcus lactis</i>
2E-1™	<i>Enterococcus faecium</i>
EF141™	<i>Enterococcus faecium</i>
LC222™	<i>Lactobacillus casei</i>
LBR1000™	<i>Lactobacillus brevis</i>
LP100™	<i>Lactobacillus plantarum</i>
Prop1-IAC™	<i>Propionibacterium jensenii</i>
8G-134™	<i>Bacillus velezensis</i>

THE FIRST OF ITS KIND!

OCEAN MINERALS™

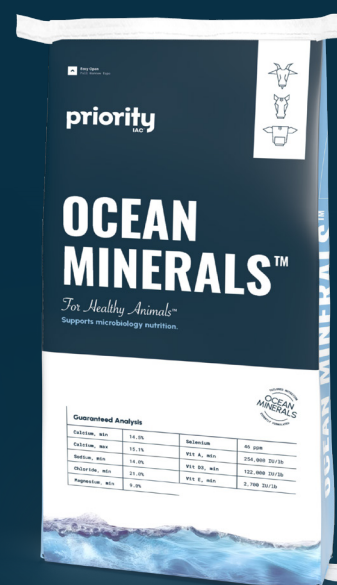
For Healthy Animals™

A complete proprietary combination of Seaweed derived ocean calcium, magnesium, and numerous other minerals act as a **Smartbacteria** catalyzer, creating the near perfect natural environment to initiate bacterial growth in support of Microbiology Nutrition.

Feeding Instructions - Horses

Working - 0.4 lb
Maintenance - 0.3 lb
Weanling & Yearling - 0.2 lb
Foals - 0.1 lb

This product contains supplemental selenium and copper.



*Refer to page 22 for more information



Swine



Poultry





GOLD SPIKE®

Support the digestive tract and reduce gut stress with Smartbacteria.

For feeding instructions and full product details. >>>



Refer to page 12 for more information



CALF GOLD 3E™

Microbiology for Poultry Development

For feeding instructions and full product details. >>>



Refer to page 14 for more information

STARTUP™ GEL

Get your animal back on feed and restart the gut with Smartbacteria.

StartUp Gel is the perfect solution to keep animals of any species and age on feed in times of transition, birth, feed changes, shipping, stress, and more.

For feeding instructions and full product details. >>>



*Refer to page 16 for more information



MAYA-PET

TOP CARE FOR YOUR TOP COMPANION

Maya Pet's all-natural supplement powder goes beyond a typical probiotic to help achieve the extra gut health and immune boost your pet needs.

mayapet.com



Immunity
boost



Healthy
digestion



Joint pain
relief



Healthy skin
& coat



Increased
energy



Increase in
metabolism



sōmaya life

BEYOND PROBIOTICS.

ANCIENT WISDOM FOR MODERN CHALLENGES.



For Healthy Humans™

We're more than a probiotic. We're the first ever "anthrobiotic" designed using highly-tested Smart Strains™ that target common gut, allergy, and immune health issues at the source.

Discover the next generation of gut health with Somaya Life Anthrobiotic™. Unlike traditional probiotics, our anthrobiotics utilize 10 targeted Smart Strains™ of beneficial bacteria to actively regulate your digestive and immune systems, promoting overall wellness.

Experience the difference with Somaya Life's Anthrobiotic™. Formulated to not just support but actively improve your health, it's your ally in achieving a balanced gut and a stronger immune system. Ideal for those seeking natural solutions for digestive issues, allergies, and preventative health.



We coined the term "anthrobiotic" to describe how our supplement actively controls your digestive and immune systems rather than simply supporting your body's health like a probiotic.

The inspiration behind anthrobiotics stems from Ancient Greek wisdom, emphasizing the importance of maintaining a balanced gut for overall health.



Improved Gut Health



Immune System Boost



Reduced Inflammation

Connect with us on
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somalaylife.com



Order Direct: 920-682-0264 or 888-444-2030
or contact your area representative.

International inquiries: 1-920-682-0264

3504 County Road CR
Manitowoc, WI 54220
priorityiac.com
info@priorityiac.com

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