

# Gold Spike™ A Powerful Strain Discovery



600 daily doses

150 daily doses

1890 daily doses

For Cattle of All Ages

## Pathogen Management + Immune Modulator

The immune system plays a critical role in the health and well-being of livestock.

Immune development and specific immunological responses in animals are influenced primarily by the microflora that inhabit the gastrointestinal tract. A healthy gastrointestinal tract in cattle resists growth of pathogens and helps maintain a properly functioning immune system. Both are critical for maximum performance and growth in healthy calves and cows.

Newly discovered for Priority Int'l Animal Concepts, Gold Spike™ includes bacteria for:

- **Pathogen Management** – Powerful strains—*Bacillus subtilis* B5000h, B5005h B5150h help reduce growth of *Clostridium perfringens*, *E. coli*, *Salmonella* and other pathogens that cause scours in calves.
- **Immune Modulator** – Newly discovered *Lactobacillus brevis* 1E-1 helps to enhance immune response in the gastrointestinal tract by quieting the pro-inflammatory response responsible for the symptoms (scours) caused by pathogenic infections.

Branded Strains:

B5000h™

B5005h™

B5150h™

1E-1

## Features and Branded Strains

- *Bacillus subtilis* B5000h, B5005h, and B5150h were selected for bacteriocin activity against a library of bacterial scour causing organisms (more than 1200 isolates from over 200 genotypes)

— In vitro inhibition testing demonstrated

- » 181 *Salmonella* isolates representing 64 genotypes including *Salmonella* isolates in the pathogen library [181 isolates from 64 genotypes – includes 13 *Salmonella enterica* serotypes (*S. angona*, *uganda*, *newport*, *montevideo*, *derby*, *choleraesuis*, *Brandenburg*, *dublin*, *mbandaka*, *anatum*, *muenster*, *saintpaul* and *typhimurium*)]

Percent inhibition of surveyed scour causing bacterial isolates in pathogen library			
Pathogens	Isolates	Genotypes*	Inhibition of Genotypes
<i>Salmonella</i>	181	64	99%
<i>E. coli</i>	126	17	100%
<i>C. perfringens A</i>	917	155	89%

\*Genotype = isolate family

- » Neonatal calf trials have demonstrated a reduction in the number of calves treated during week of peak scour challenge

Number of calves treated for scours during week of peak scours			
Trial (Calves/ Group)	Non-treated control group	Smart ONE treated group	% Reduction in Treatment
1 (75 calves)	23%	11%	53%
2 (60 calves)	33%	12%	30%
3 (100 calves)	71%	68%	4.5%

- *Lactobacillus brevis* 1E-1

— An immunomodulator that:

- » Controls growth-compromising inflammation by reducing the anti-inflammatory response in the intestinal tract
- » Has been shown to promote T-cell development at the gastrointestinal tract (T-cells are a group of white blood cells that act like soldiers to search out and destroy targeted invaders)



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## Branded Strains:

B5000h™

B5005h™

B5150h™

1E-1

## Additional Benefits

- Scientific strain selection using “cutting edge” DNA technology
- Developed using new molecular-based methods that identify (select) unique strains of bacteria (found in the rumen and/or intestinal tract) that correlate to specific (digestive) functions in the animal. Techniques including: RAPD, Multiplex PCR, DGGE, SSH, Real Time PCR, T-RFLP, FISH, Microarray, Multivariate Statistics/Ordination, Bioinformatics)
- Includes special moisture scavenger agents to control moisture for longer shelf life
- BQS (Quality) certified
  - 21-Step QC process
  - Just-in-time manufacturing
  - Genetic fingerprinted
  - Purity, count, and genetic tested
  - High temperature stability tested
- Special barrier packaging for protection and stability of microorganisms



Genotype Tested  
Genetic Fingerprinted

## Directions for Use:

### Scouring calves:

Cool milk replacer or waste milk to 120°F (48.89°C) or less before mixing in Gold Spike™. Add Gold Spike™ to milk replacer, waste milk or electrolytes at the rate of six (6) grams (2 scoops) per head per day for 2 to 5 days. Continue feeding Gold Spike™ during administration of medications. Feed in combination with Smart Bac 6™, Smart ONE™, or Calf GOLD™ for optimum product synergy.

### Unthrifty cows:

Add to TMR at a rate of six (6) grams per head per day for 5 days.

### Sick or lethargic cows:

Top dress on feed at a rate of 1 oz (28 grams) per head per day for 3 days.

Gold Spike™ should be fed to cows in combination with P-One™ for optimum product synergy.

*To learn more about Gold Spike™ or to start feeding, call your local veterinarian or representative.*



*Distributed by Priority Int'l Animal Concepts*



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