



DUODECIM

(do-o-d-c-um)

Clostridium perfringens can cause abomasal bloat & sudden death in milk-fed calves.

Duodecim is a blend of sodium salts of fatty acids and direct-fed microbials to be added to the milk of preweaned calves.

Transmission electron microscopy of *Clostridium perfringens*

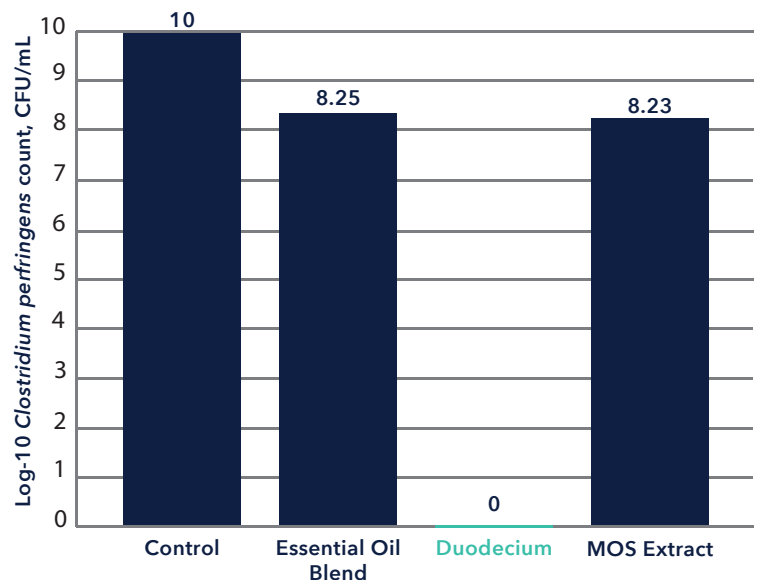


Viable *Clostridium perfringens*



Killed *Clostridium perfringens* in the presence of Duodecim

Duodecim Inhibits Growth of *Clostridium Perfringens* in Milk Culture



*Data reported after 24 hr culture. Duodecim and MOS extract were tested at 0.5 or 1 mg/mL and Pure Essential Oil Blend tested at 0.0125 and 0.025 mg/mL.



INTESTINAL
HEALTH



VIGOR



PROTECT

**A blend of sodium salts of fatty acids and direct-fed
microbials to be added to the milk of preweaned calves.**

GUARANTEED ANALYSIS

Dry Matter (min)..... 95%
Fat (min)..... 65%
Bacillus subtilis (min).... 200 billion CFU/lb

DIRECTIONS FOR USE

Finished Feed or Milk Replacer:

- Add 1 to 8 kg (2.2 to 17 lbs) per ton

On-farm:

- Supplement 1 to 4 grams per head per day.

INGREDIENTS

Sodium Salts of Fatty Acids, Dried *Bacillus subtilis* Fermentation Product, and Butylated Hydroxytoluene (preservative).

PACKAGING & STORAGE

Available in:

- 50 lb bag (#5031)
- 10 kg bucket (#5032)

Store in a cool, dry place. Keep tightly closed and minimize exposure to moisture.



MBFEEDS.COM