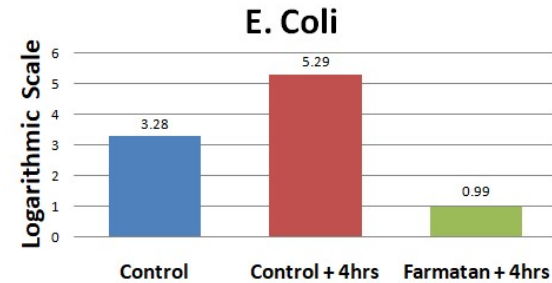


### Farmatan – Impact on animal Health

- ⇒ Protects the gut – improve lower gut wall integrity by improving tight junctions between cell walls preventing leaky gut and toxin absorption from pathogens such as Coccidiosis, Cryptosporidium, Clostridia, E. coli while boosting good bacteria.\*
- ⇒ Reduces pathogen load – naturally occurring Gallic and Ellagic acid in the tannins reduce bacteria growth at higher pH in lower GI tract.\*
- ⇒ Reduces duration and severity of scours\*\*



Source: Ghent University, Belgium

\*Buzzini et al, Mini-Reviews in Medicinal Chemistry, 2008, Antimicrobial and Antiviral Activity of Hydrolysable Tannins

\*\* Bonelli et al, Oral administration of chestnut tannins to reduce the duration of neonatal calf diarrhea

### Tannin impact

- 8,000 calf producer in WI and MO
- ⇒ Continued scouring from E. coli and Cocci
- ⇒ Added Tannin in milk replacer & calf starter
- ⇒ Decline in scours >80%, Death loss <1%

#### 1,400 calf producer, Missouri

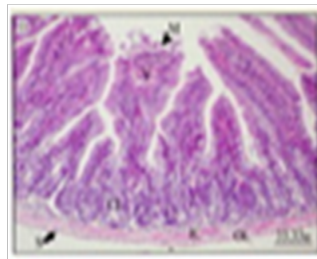
- ⇒ Persistent calf scours to E. coli
- ⇒ Prior to trial was treating over 35%
- ⇒ Fed 4g/head per day with milk replacer and dropped treatments to <4%

#### 4,200 Dairy, self raised calves, S. Dakota

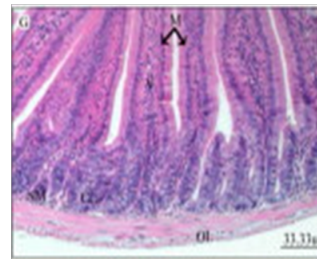
- ⇒ Recurring cases of cryptosporidium
- ⇒ Replaced low level antibiotic in raw milk with 5g per head per day Farmatan
- ⇒ <1% death loss, improved dry feed intake

Crypts affected by Cryptosporidium

Without Tannin:



With Tannin:



### Recommended Feeding

- ⇒ New Calves
- 8 cc's gel\***
- after Colostrum**



\*Farmatan GEL is NOT OMRI listed.



- ⇒ Milk Replacer and Dry feed
- Farmatan 5g/head/day**

- ⇒ Weaned Calves/Rearing
- Farmatan 10g/head/day**