

Research Notes

ARM & HAMMER



CELMANAX helped improve health and performance in preweaned commercial dairy calves

STUDY OVERVIEW

- Optimizing health and reducing morbidity and mortality in preweaned dairy calves without antibiotics is of primary interest.
- This trial¹ was conducted to evaluate health and performance of milk-fed commercial Holstein calves supplemented with CELMANAX.[™]
- The study was conducted at two commercial farms in Wisconsin (Herd A, n = 120 (38%); Herd B, n = 199 (62%)). Calves were housed indoors, individually, for days 1 – 6, and then group housed with an automatic feeder until day 56. Three-day-old calves were randomized into treatments with about 80 calves per treatment.
- The study included the following dietary treatments:
 - Control
 - CELMANAX SCP 2g/h/d
- Calves were monitored for overall health, fecal pathogen shedding, and average daily gain (ADG) during the preweaning period.
- Data was statistically analyzed for overall means and to account for variables including treatment, farm, study week and month, and passive transfer status.

RESULTS

- Besides treatment interactions, interactions were also noted between farm origin, study week, study month and passive transfer status. However, the following overall conclusions were noted.
- CELMANAX numerically reduced predicted probability of severe diarrhea (Figure 1).
- CELMANAX reduced prevalence of *Salmonella* ($P=0.03$) and rotavirus ($P=0.03$) but did not change the prevalence of *C. parvum* and coronavirus (Figure 2).

FIGURE 1: Probability of developing severe diarrhea within first 21 days (fecal score=3)

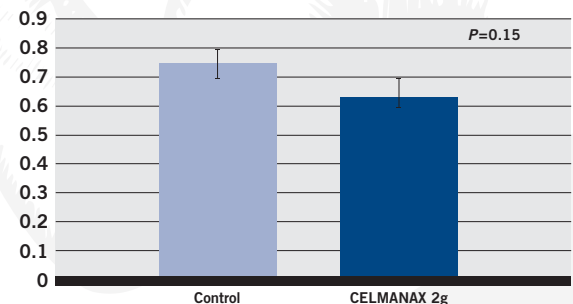
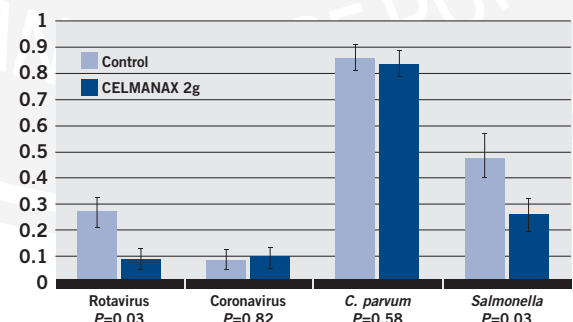


FIGURE 2: Predicted probability of shedding

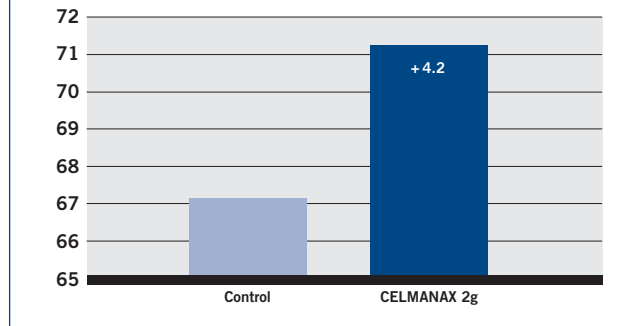


- CELMANAX™-fed calves had numerically higher body weight gain at 48 days of age compared to control calves (Figure 3).

CONCLUSIONS

- CELMANAX helped improve some gut health parameters, which led to numerical improvement of growth and performance in preweaned dairy calves.
- It appears that the ability of CELMANAX to protect young dairy calves from developing severe diarrhea likely depends on herd levels factors.

FIGURE 3: Body weight gain at 48 days of age, lbs.



NOTE: The study presented here was part of a larger study where CELMANAX SCP 0g, 1g, 2g and 4g were tested. 2g inclusion gave the best overall results.



¹ The complete study has been presented at AABP, September 14-16, 2017, Omaha, Nebraska.

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