component feeding program distributed manually or a total mixed ration (TMR). Treatment reduced significantly logBHB concentration ($p<0.001$). Interaction between treatment and biochemistry number was significant ($p=0.03$). The fall on logBHB concentration with treatment was more pronounced at the first biochemistry evaluation. Interaction between treatment and risk for ketosis was also significant ($p=0.01$) in the later model. Cows in HRK and MRK herds had an important decrease of logBHB concentration with treatment, but no effect was found for cows in LRK. GGT was lowered with the use of Rumensin CRC ($p=0.01$).

Conclusions

Treatment with the monensin controlled-release capsule significantly affects the energy-related blood constituents, and these effects are more pronounced in the HRK herds. All other blood constituents were unaffected by Rumensin CRC treatment. The results of this study are in accordance with findings from the Rumensin CRC pre-approval study published by Duffield *et al* in 1998.

Daily Gain and Incidence of Scours in Holstein Calves fed Milk Replacers Supplemented with Antibiotics or Enteroguard®

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Introduction

To control infection by enteric pathogens in preweaned calves, antibiotics, oligosaccharides, or probiotics are often included in milk replacers.

Materials and Methods

Forty-five Holstein calves were used to compare the effects of milk replacers containing either antibiotics (oxytetracycline at 138 mg/kg (62.7mg/lb) and 276 mg/kg, (125 mg/lb) (MRA), n = 22) or a blend of fructooligosaccharides, allicin, and probiotics (Enteroguard®, MRE, n = 23) on daily gain and incidence of scours of Holstein calves. Milk replacers were fed at 0.23 kg (0.5 lb) twice daily. All calves received 2.84L of colostrum within 2 hours of birth and 12 hours later.

Results and Discussion

Mean immunoglobulin content of the colostrum as determined by specific gravity was 55 mg/ml and was not different (P = 0.86) between treatments. Starter grain mix was fed for ad libitum consumption from 21 to 35 days of age. There were no differences between starter intakes (mean = 0.22 kg (0.48 lb) /d, P = 0.29) or mean body weight (0.17 (0.37 lb) vs. 0.14 kg (0.31 lb)/d for MRA and MRE, respectively, P = 0.47). Gain of calves fed MRA tended to be less than that of claves fed MRE during Week 2 (0.07 (0.15 lb) vs. 0.09 kg (0.20 lb) /d) and greater during Week 5 (0.62 (1.36 lb) vs. 0.51 kg (1.12 lb) d, P = 0.09 for treatment by week interaction). Total gain for calves fed MRE was no different from gain for calves fed MRA (P= 0.53). Likewise, feed efficiencies (gain/dry matter intake) were not different (P = 0.80); but feed efficiency tended to be lower in calves fed MRA during Week 2 than for calves fed MRE and greater during Week 5 (P = 0.06 for treatment by week interaction). Severity of scours as measured by fecal scores was not different between MRA and MRE (1.8 (4.0 lb) vs. 1.9 kg (4.2 lb) /d, P = 0.92). Serum proteins, an indirect measure of immunoglobulins, were similar for MRA and MRE (5.4 vs. 5.3 mg/dl, P = 0.21).

Conclusion

Overall performance, as measured by weight gain, feed efficiency, and incidence of scours of calves fed milk replacer containing Enteroguard® was equal to that of calves fed milk replacer containing antibiotics.