Calf Notes.com

J. D. Quigley, C. J. Kost, and T. M. Anspach. 2001. Evaluation of bovine or porcine plasma in calf milk replacers on mortality, morbidity, intake and growth of young dairy calves.

Journal of Dairy Science, Volume 84(Supplement 1), Page 434.

Replacement of a portion of the whey protein concentrate with spray-dried animal plasma in calf milk replacer (CMR) formulations can provide a source of immunologically active IgG without markedly affecting digestibility or intake. However, data indicating the importance of the species origin of animal plasma are lacking. In this study, Holstein bull calves (n = 120) at the APC Company Research Facility in Ames, IA were fed one of three CMR for 42 d. Experimental CMR were formulated to contain whey protein concentrate (WPC) as the primary protein source or WPC plus 5% spray-dried bovine plasma (SDBP) or WPC plus 5% heat stable porcine plasma (SDPP). Calves were also offered commercial calf starter and water for ad libitum consumption. Mortality was reduced from 25% to 7.5% and 5.0% when calves were fed CMR containing WPC, SDBP, or SDPP, respectively. Morbidity, measured as number of days that calves had diarrhea (scours) was reduced by 30% ($P < 0.01$) when SDBP or SDPP were fed. Mean number of days with scours were 6.1, 3.9 and 4.7 d for calves fed WPC, SDBP and SDPP, respectively. Fecal scores during the 42-d study tended to be reduced ($P < 0.10$) and feed efficiency tended ($P < 0.10$) to be improved when SDBP or SDPP was fed. Mean fecal scores were 1.66, 1.59 and 1.61 for calves fed CMR containing WPC, SDBP and SDPP, respectively. Mean feed efficiency was 170, 265 and 211 g of BW gain/kg DM intake, respectively. Calves fed SDPP tended ($P < 0.10$) to consume less starter, total DM and protein compared to calves fed SDBP and tended to have lower BW gain during the first 28-d of the study. Mean BW gain from d 0 to d 28 was 83, 119 and 80 g/d for calves fed WPC, SDBP and

SDPP, respectively. There were no differences in BW gain after 28 d, and calves ended the study weighing 56.4, 58.2, and 56.8 kg, respectively. Both SDBP and SDPP were effective in reducing mortality and mortality during the trial and may be effective adjuncts to a calf management program.