P244 Sodium butyrate and monensin supplementation to postweaned heifer diets: Effects on growth performance, nutrient digestibility, and health.

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Objectives of this study were to compare sodium butyrate (SB) to monensin (MON) on growth, digestibility, and health of postweaned heifers. Forty Holstein heifers (age = 84.2 ± 1.2 d; average BW = 99.78 ± 10.77 kg) were fed diets ad libitum. Heifers were blocked by birth date and assigned to 1 of 4 treatments in a randomized complete block. The control group (CON) was fed 100 g of SBM carrier, while treatments were supplemented with carrier + 0.75 g SB/kg of BW, 1 mg MON/kg of BW, or 1 mg MON/kg of BW + 0.75 g SB/kg of BW (MSB). Amounts of orts and feed offered to each heifer were measured daily. Initial BW, skeletal measurements and blood samples were taken d1 before the receiving treatment, and every wk thereafter for 12 wk. Fecal grab samples were taken weekly from each heifer for coccidia counts. Two total-tract digestibility phases: 21–27 d (wk 3) and 63–69 d (wk 9) were used. Digestibility was measured by acid detergent insoluble ash. Single degree freedom contrasts for CON vs. ADD (control vs. additive), SB vs MON, and SB+M vs MSB (single additives vs. MSB) were determined. Compared with CON, ADD tended to increase average BW (P = 0.10), final BW (P = 0.09), and heart girth (P = 0.10). Compared with CON, ADD increased DMI (CON = 4.0, SB = 4.5, MON = 4.2, MSB = 4.5 kg/d; P = 0.03). Compared with CON, ADD decreased coccidian oocysts (CON = 1,248.9, SB = 697.9, MON = 762.5, MSB = 781.8 coccidia/ kg of feces; P = 0.03). Compared with MON and SB, MSB tended to increase heart girth (P = 0.07). Compared with MSB, MON and SB tended to have greater plasma glucose (P = 0.09). Compared with SB, ADG/DMI was improved in MON supplemented heifers (CON = 0.27, SB = 0.25, MON = 0.28, MSB = 0.27; P = 0.04). Besides heart girth, no other differences were observed for skeletal measures (P ≥ 0.24). Week 3 total-tract digestibility (DM, NDF, ADF, Hemicellulose, OM, and fat) were similar (P ≥ 0.16). Week 9 total-tract digestibility (DM, CP, ADF, Hemicellulose, Starch, OM, and fat) were similar (P ≥ 0.12). Overall, additive supplementation offers positive results in growth performance, and reduced coccidia counts

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