

Comparison of the impact of LongRange® (eprinomectin) versus Dectomax® (doramectin) and fly tags on growth of post-weaned grazing dairy heifers

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Limited information is available on gain and structural growth of young grazing dairy heifers when treated with different parasiticides. The objective of this study was to compare the effects of LongRange® (eprinomectin) (LGR) against Dectomax® (doramectin) and pyrethroid impregnated fly tags (DFT) on gain, structural growth, and fecal egg counts (FEC) of grazing, post-weaned Holstein dairy heifers. Forty-eight heifers were randomly placed into 1 of 12 groups according to BW (169.5 ± 8.5 kg of BW and 149.8 ± 13.8 d of age) and assigned to 1 of 2 treatments: 1) LGR or 2) DFT. The BW, hip height (HH), withers height (WH), hip width (HW), body condition score (BCS), heart girth (HG), blood samples, and fecal samples were collected every 4 wk from June until August 2014. Face flies (FF) and horn flies (HF) were counted twice/wk. Water consumption for each paddock was recorded 2 times/wk. Temperature and relative humidity were recorded hourly. Data were analyzed using PROC MIXED in SAS as repeated records using pen within treatment as a random variable. Daily midday temperatures (1200 to 1500 h) averaged 26.9 ± 0.14 °C during the study. The ADG averaged 0.92 kg/d ($P = 0.79$) with BW at the end of the study averaging 210.2 and 208.9 kg ($P = 0.38$) for LGR and DFT, respectively. The HH and WH ($P = 0.61$) averaged 117.4 and 112.3 cm, respectively, at the end of the study. The HG ($P = 0.38$), HW ($P = 0.34$), and BCS ($P = 0.86$) were also similar between treatments. However, PUN values tended to be greater ($P = 0.06$) for LGR compared to DFT (12.7 and 11.4 mg/dl, respectively). Water intakes averaged 18.8 L/d for DFT and 20.1 L/d for LGR ($P = 0.67$). Fecal egg counts were lower ($P = 0.02$) for heifers treated with LGR compared to DFT (95.2 and 246.7 epg, respectively) and HF counts tended ($P = 0.08$) to be lower for DFT than LGR (9.7 and 17.2 flies/heifer, respectively) with no differences in FF counts ($P = 0.24$). Treating post-weaned grazing Holstein dairy heifers with either LGR or DFT resulted in similar growth performance; however, LGR reduced FEC and DFT reduced the presence of horn flies.

Key Words: doramectin, dairy heifers, eprinomectin